



Analysis of Traditional Healers in Lesotho: Implications on Intellectual Property Systems

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The African Technology Policy Studies Network (ATPS) is a multi-disciplinary network of researchers, private sector actors and policy makers promoting the generation, dissemination, use and mastery of science, technology and innovation (ST&I) for African development, environmental sustainability and global inclusion. ATPS intends to achieve its mandate through research, capacity building and training, science communication/dissemination and sensitization, participatory multi-stakeholder dialogue, knowledge brokerage, and policy advocacy.



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List of Acronyms

TB	Tuberculosis
HIV	Human immunodeficiency virus
AIDS	Acquired Immunodeficiency Syndrome
UNAIDS	United Nations Programme on HIV/AIDS
IK	Indigenous Knowledge
IPR	Intellectual Property Rights
ABS	Access and Benefit Sharing
IKS	Indigenous Knowledge Systems
TK	Traditional Knowledge
R&D	Research and Development
WHO	World Health Organization
STDs	Sexually Transmitted Diseases
WHO	World Health organization
WTO	World Trade Organization
WIPO	World Intellectual Property Organization
AU	African Union
SADC	Southern African Development Community
GRs	Genetic Resources
TCE	Traditional and Cultural Expressions
LDC	Least Developed countries
TRIPS	Trade-Related Aspects of Intellectual Property Rights
ESA	Eastern and Southern African
EC	European Community
EU	European Union
ARIPO	African Regional Intellectual Property Organization
PAs	Protected Areas
RMAAs	Resource Management Acts
ART	Anti-retroviral
STIP	Science and technology Policy
S&T	Science and technology
SMEs	Small Medium Enterprises
UNEP	United Nations Environment Programme
GEF	Global Environment Facility
LENEPWHA	Lesotho network of people living with HIV/AIDS

Abstract

Traditional healers in Lesotho and other African countries have since pre-historic times played a major role in primary health care, counseling and rituals performed for different purposes in the society. Traditional healers in the past had their houses located very close to the main house of the village chief. This was to ensure that the healer is always accessible to the chief as they were not only entrusted in disease healing and driving away witchcraft but they were also the main advisors to the chief. The knowledge traditional healers have are on forecasting certain events, protecting crops and animals from hail and thunder storm, healing the sick, and driving away the evil spirits, is often not documented and as a result it is slowly going into extinction. This valuable knowledge is often not protected by law and is known by a few.

The emergence and complexity of diseases like HIV and AIDS and other chronic diseases have always been interpreted by the society to be related to witchcraft. That misconception has resulted in many people emerging, especially in urban areas, as traditional healers claiming to cure certain diseases including HIV and AIDS. It was noted during the interview that more than 50% of traditional healers don't believe in HIV and AIDS and they attribute it to certain diseases, witchcraft or failure to observe certain cultural activities.

The rapidly growing number of people claiming to be traditional healers has put pressure on biodiversity as certain plant species are recklessly being harvested from the rural areas and sold in the cities. The study revealed that herd boys who are considered to be very knowledgeable about the herbs growing in the rangelands and the forests are used to guide in the identification of these herbs or harvest them. They are paid very little money for this activity therefore the community does not benefit from their genetic resources. Healers interviewed agreed that they now have to travel long distances to get certain herbs for their patients which never used to be the case. More than 80 % of the doctors interviewed agreed that there should be a policy in place that protects their knowledge and traditional medicine. Beneficiaries to traditional medicine pointed out that they would prefer to get traditional medicine packed in more hygienic containers and the healers should operate in more decent places like the modern doctors.

1. Introduction

1.1 Background Information

Lesotho is located in the Southern Africa and it is completely surrounded by South Africa. It is on the highest part of the Drakensburg escarpment with the altitude reaching 3,482 meters above sea level at some places. It lies between 30° South and 29° eastern longitude and has a total surface area of 30 648 km² (Chakela, 1999). Lesotho is divided into four agro-ecological zones namely the Lowlands, 1500-1800m high, the foothills 1800- 2200m high, and Mountains 2200-3000m. The Senqu River valley, which is the fourth agro-ecological zone, is the extension of the lowlands into the eastern mountain along the Senqu River.

Ever since the discovery of HIV and AIDS in Lesotho in 1986, Lesotho has continued to deteriorate from bad to worse. Lesotho is currently the third highest HIV and AIDS hot-spot in the world (UNAIDS 2007). Furthermore, Lesotho is confronted by a multiple crisis caused by high HIV prevalence, now estimated at approximately 23% of adults aged between 15-49, and that, 57% of all infection are in females (UNAIDS, 2005). In addition to the 300,000 adults estimated to be living with HIV, at the end of 2007, approximately 20,000 children were also HIV positive, and by the end of 2007, close to 90,000 had lost one or both parents to AIDS.

The spread of HIV and AIDS, along with diseases like tuberculosis (TB), Multi-drug resistant TB, Pneumonia and high unemployment rate; mainly due to retrenchment of many Basotho miners, are among the most significant causes of poverty and vulnerability. Along with the migration towards urban and peri-urban areas, and the absorption of many young female workers by the textile industries, these trends are affecting the traditional social structures within the households

and at the village level. As a result, the social protection mechanisms which so far have helped the Basotho people cope with shocks and stresses are in decline. At the same time, public welfare policies have failed to take over these tasks (Turner 2005).

Basotho like other communities have their own unique traditional knowledge, beliefs and culture that help them raise their children, unify them as a nation, protect themselves, their livestock and crops from natural disasters and diseases and to manage their environment better in a sustainable manner. However, this valuable knowledge is often hidden, undocumented, usually known by a few and mostly the elderly in the society. And in most cases, some of these elderly people die with this valuable treasure. As an old African proverb states “*when the old man dies, the library burns to the ground*”; societies are slowly losing some of the important knowledge as old people die. According to Louise (1998), indigenous knowledge is stored in people's memories and activities. It is expressed in stories, songs, folklore, proverbs, dances, myths, cultural values, beliefs, rituals, community laws, local languages and taxonomy, agricultural practices, equipment, materials, plant species and animal breeds.

Lesotho Science and Technology Policy 2006 – 2011 fifth objective of the five objectives emphasizes on the Promotion and commercialization of indigenous knowledge systems. Important components of IK-systems like Intellectual Property Rights (IPR) and Access and Benefit Sharing (ABS) are not clearly articulated in the policy. Therefore, there is need for a national multi-stakeholder policy dialogue that will lead to the development of a policy for Indigenous Knowledge Systems (IKS) or strengthening the Science and technology policy on IKS-Systems. As Murthi (2005), pointed out; national development policies especially those related to agriculture and tradition, need to be taken into account when dealing with Traditional Knowledge (TK)-based approaches in their considerations, from economic measures to the use of publicly funded Research and Development (R&D) devoted to participative research with TK using communities that feel they own and can use R&D to strengthen their innovative capacity and develop their own development systems.

The use of indigenous knowledge in innovation development has led to the number of surprising successes. The use of indigenous knowledge systems has demonstrated positive results in the fields of: Land and water resource

management, use and conservation of genetic material and use of indigenous knowledge on medicinal plants (Hambly and Angura, ed., 1996; Mendoza and Luning, 1997; Leonti, 2003; Tshabalala 2005).

The importance of IKs in their sustainable development cannot be overemphasized. However, very few studies have been done in Lesotho to determine the existing, preservation, promotion, intellectual property rights and access and benefit sharing on indigenous knowledge systems.

1.2 Objectives

The overall objective of this investigation is to understand the role played by the traditional healers in primary health care systems and the cases of intellectual property systems.

Specific objectives:

1. To identify the sources of traditional knowledge systems especially traditional medicine.
2. Determine the existing knowledge traditional healers have on HIV and AIDS and the role they play in primary health care.
3. Determine the cases of access and benefit sharing and intellectual property rights in traditional medicine.
4. To determine the use and confidence the society has on traditional healers.
5. To determine if traditional healers realize their impact on biodiversity through harvesting herbs for medicine.
6. Recommend ways in which traditional medicine can be promoted and commercialized to enhance the fifth objectives of Science and Technology Policy.

2. Literature Review

2.1 Traditional medicine and International Organizations and treaties.

Herbal remedies are considered the oldest forms of health care known to mankind on this earth. Prior to the development of modern medicine, the traditional systems of medicine that have evolved over the centuries within various communities, are still maintained as a great traditional knowledge base in herbal medicines (Mukherjee and Wahil, 2006). World Health Organization (WHO), defines traditional medicine as the sum total of all the knowledge and practices whether, explicable, mental or have social imbalance and relies exclusively on practical experiences and observation handed down from generation to generation, whether verbally or in writing (WHO). According to M'Vunganyi (2009), in most African societies, traditional medicine plays an important role in the lives of millions who cannot access modern medicine. It is part of the first set of response mechanisms that people rely on in cases of medical emergencies. PAHO (1999) further states that in developed countries, the use of traditional medicine is increasing because of better health care, while in developing countries the demand is due to economic issues and its availability as the only source of health care. Daniels (2007), also pointed out that the great majority of Africans routinely use the services of traditional healers for primary health care and the estimates put the number to as high as 85% in Sub-Saharan Africa. Traditional healers remain popular because they are accessible, affordable, adaptable and culturally familiar and thus acceptable and respected in the wider community. Furthermore; Traditional medicine is highly popular in many developing countries because it is firmly embedded within wider belief systems. Stanley (2004), explained that Africa's traditional healers can be most instrumental in HIV and AIDS prevention. For starters, these specialists treat most

of the cases of STD's which are believed to be major co-factors in the spread of HIV.

Conserve Africa (2004), explained that in rural areas one has to sometimes travels for days before getting to the nearest dispensary and pharmacy. Therefore people loose working days, transport fares and the high cost of medicine. In spite of the enormous role played by traditional medicine in primary health care it continues to be disregarded in development planning and its contribution to the society is generally neglected. The majority of African countries including Lesotho are currently geared towards the privatization of state hospitals, therefore, the dispensation of free care and free medicine is no longer going to be in place; as a result health services are going to be very expensive. International organizations like World Health organization (WHO), World Trade Organization (WTO), World Intellectual Property Organization (WIPO), African Union (AU) and the Regional bodies like SADC in Southern Africa, civil societies and the governments have started recognizing the role played by traditional herbalists in primary health systems. However few, African countries have a legal framework for controlling access to indigenous knowledge and biological resources or ensuring benefits arising from their use are shared fairly (Hebden, 2006). Therefore, a number of strategies and the policy frameworks are continually being developed to increase formal participation and protection of traditional herbalists in the health systems.

The WHO 2002 - 2005 strategy on traditional medicine outlines a number of challenges on the use of traditional medicine. One of the challenges is the lack of policy on traditional medicine by a number of WHO member states. Policy provides a sound basis for defining the role of traditional medicine on health care delivery, ensuring that necessary regulatory and legal mechanisms are created for promoting and maintaining good practice, that access is equitable, and that the authenticity, safety and efficacy of therapies are assured. Another challenge concerns the intellectual property and patent rights, addressing questions about how best the benefits accrued from traditional medicine can be shared between the innovators and the holders of the technology. There are some international and regional organizations and agreements aimed at helping the member states to address these problems.

2.2 World Intellectual Property Organization (WIPO)

World Intellectual Property Organization (WIPO), which is a specialized agency of the United Nations mandated to develop a balanced and accessible intellectual property (IP) system, works through a number of programs. There is a program that specifically addresses traditional medicine as Traditional knowledge, genetic resources and traditional cultural expressions/folklore. WIPO's work addresses the role that intellectual property (IP) principles and systems can play in protecting traditional knowledge (TK) and traditional Cultural expressions (TCE) from misappropriation and in generating and equitably sharing benefits from their commercialization and the role of IP in access and benefit-sharing in genetic resources. One of the decisions taken by WIPO's working committee on TK and TCEs, in October 2009, is to take text-based negotiations with the objective of reaching an agreement on a text of international legal instrument which will ensure the effective protection of GRs, TK, and TCE and the text is expected to be completed by 2011.

2.3 Trade-Related Aspects of Intellectual Property Rights (TRIPS)

Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) administered by World Trade Organization (WTO) attempts to narrow the gaps in the way these rights are protected around the world, and to bring them under common international rules. It establishes minimum levels of protection that each government has to give to the intellectual property of fellow WTO members. However, there are unresolved issues and disagreements between the Western World (America & Europe) and the Developing World on the TRIPs Article 27.3(b). The mentioned article states that WTO Member must provide Patent protection over micro-organisms and microbiological processes, such as those used in biotechnology today, but countries are free to exclude plants and animals from their patent law. However, all nations must provide intellectual property titles over plant varieties either through patents or through an effective Sui generis System. TRIPS, therefore, provides opportunities for countries to have alternative ways of protection rather than Intellectual Property Rights.

Countries are therefore free to come up with policies and legal frameworks that address the needs of local people e.g. protection of Traditional Knowledge and Farmers` Rights. TRIPS have a number of agreements referred to as flexibilities which member states are expended to implement. These flexibilities include:

transition period, compulsory licensing, public non commercial licensing of patents, parallel importation, Exceptions from patentability, and limits on data protection (Musungu, 2005).

Transition period is divided into three categories based on the state of development (Developed, Developing and Least Developed countries-LDC) of each country. This agreement provides the transition period for the implementation of TRIPS' minimum standards. The expiry date for the developed countries and developing countries lapsed in 2005 while the least developed countries like Lesotho, Angola, and Zambia in the SADC region have been given up to 2016 with the possibility of extension (Mabika, 2006). Munyuki and Machemedze, (2010), recommended that the least developed countries in the Eastern and Southern African (ESA) regions must make their case at the WTO for the waiver of the transition period beyond 2016 and also for the extension on patent protection. This is in view of the fact that the European Community (EC) wants ESA countries to agree on protecting intellectual property rights especially for EU companies involved in Research and development. ESA countries will then be required to implement certain provisions that will favor EU countries at the expense of developing nations making them pay heavy royalties for any technology developed by EU.

2.4 African Regional Intellectual Property Organization (ARIPO)

African Regional Intellectual property Organization (ARIPO) was formed after the member states realized the benefits they would derive from effective and continuous exchange of information and harmonization and co-ordination of their laws and activities in industrial property matters. In august 2010 ARIPO and its members adopted a protocol on the protection of traditional knowledge and expression of folklore. This was adopted in a conference that was held in Namibia at the coastal town of Swakopmund and the protocol was therefore named Swakopmund. The Protocol, upon entry into force, will empower the custodians and holders of traditional knowledge and expressions of folklore to utilize their knowledge for socio-economic development and wealth creation. The implementation of the Protocol will curtail the ongoing misappropriation, bio-piracy and prevent illicit claim of traditional knowledge-based inventions and patent applications and enable the ARIPO Office to register traditional knowledge and expressions of folklore that are trans-boundary and multicultural in nature,

the so-called regional traditional knowledge and expressions of folklore (ARIPO, 2010).

2.5 The Convention on Biological Diversity (CBD).

The African Union's African Model Law (2000) has clauses on the Rights of Local Communities, Farmers and Breeders as well as the regulation of access to Biological Resources. The Law stipulates that the State and its people exercise sovereign and inalienable rights over their biological resources and communities also have rights over their biological resources, knowledge and technologies that represent the very nature of their livelihood systems and that have evolved over generations of human history. The Law further mentions prior rights which take precedence over rights based on private interests.

The Convention on Biological Diversity (CBD) is another important convention which has created a new environment for the protection of biodiversity and indigenous knowledge and for benefit sharing. It goes beyond conservation and addresses issues like bearing the burden and sharing the benefits fairly and equitably between countries which supply and countries which use biological resources on one hand; and between indigenous and local communities and users in the modern sector on the other. Article 8(j), of CBD explicitly recognizes indigenous and local communities' contribution to biodiversity conservation, calls for respect and support for their knowledge, innovations and practices, and confirms indigenous people's rights over the knowledge they hold.

The Article also calls for equitable benefit sharing (WWW.CBD.int/convention). CBD is more specific on Access and Benefit Sharing which involves genetic resources where Traditional Medicinal Plants can be protected through various legal frameworks. According to Timmermans (2001), the main principles of the CBD on immediate interest in the context of traditional medicine are: State sovereignty over genetic and biological resources; Access to and use of genetic and biological resources and associated knowledge should be based on mutually agreed terms and be subject to prior informed consent of both the State and the providers of the resources/the holders of the knowledge; Fair and equitable sharing, on mutually agreed terms, of the benefits arising from the use of genetic resources and associated knowledge.

2.6 African Union Declaration on traditional medicine and Africa health strategy

In a statement delivered by Gawans, B in 2005 on the celebration of the African Traditional Medicine day, he pointed out that in July 2001 the Assembly of OAU heads of states and government at the summit held in Lusaka declared the period 2001 – 2010 as the decade for African Traditional Medicine. The health Strategy for Africa: 2007 – 2015 has indicated that African Union Member States should consider establishing coordinating mechanisms at national and regional levels to facilitate the implementation of the Traditional Medicine Plan of Action. Research in Traditional Medicine should be promoted and funded to identify efficacious and safe traditional medicines and assist Traditional Health Practitioners patent their products. Furthermore, countries should integrate African Traditional Medicine into their health systems recognizing its strengths and its limitations.

The priority areas for the strategy for implementing the Plan of Action on the AU Decade of African Traditional Medicine include:

1. Sensitization of the Society on Traditional Medicine
2. Legislation on Traditional Medicine
3. Information, Education and Communication
4. Resource Mobilization
5. Research and Training
6. Cultivation and Conservation of Medicinal Plants.
7. Local Production of Standardized African traditional medicines.
8. Protection of Traditional Medical Knowledge (TMK)
9. Partnerships
10. Evaluation, Monitoring and Reporting Mechanisms

2.7 SADC Pharmaceutical Business Plan 2007 – 2013

The overall goal of the SADC Pharmaceutical Business Plan is to ensure availability of essential medicines including African Traditional Medicines to reduce the burden of diseases in the region. Its main objective is to improve sustainable availability and access to affordable, quality, safe, efficacious essential medicines including African Traditional Medicines. In order to achieve the overall goal and the main objective, the following strategies will be pursued:

- i) Harmonizing standard treatment guidelines and essential medicine lists;
- ii) Rationalizing and maximizing the research and production capacity of local and regional pharmaceutical industry of generic essential medicines and

- African Traditional Medicines;
- iii) Strengthening regulatory capacity, supply and distribution of basic pharmaceutical products through ensuring a fully functional regulatory authority with an adequate enforcement infrastructure;
 - iv) Promoting joint procurement of therapeutically beneficial medicines of acceptable safety, proven efficacy and quality to the people who need them most at affordable prices;
 - v) Establishing a regional databank of traditional medicine, medicinal plants and procedures in order to ensure their protection in accordance with regimes and related intellectual property rights governing genetic resources, plant varieties and biotechnology;
 - vi) Developing and retaining competent human resources for the pharmaceutical programme;
 - vii) Developing mechanisms to respond to emergency pharmaceutical needs of the region; and
 - viii) Facilitate the trade in pharmaceuticals within SADC.

2.8 Lesotho Vision 2020

The 2020 vision states: “Lesotho shall be renowned for its environmental management. The country's diversity of life systems will be supported and protected by a nation which is environmentally conscious and whose people are in balanced existence with the natural environment. Basotho will derive continuing benefits from the conservation and sustainable use of their biological diversity. The several global conventions and treaties that Lesotho has signed and ratified shall be translated into concrete actions which will sustain care and management of the environment at large”

2.9 National Biodiversity Strategy and Action Plan Priority Activities

Priority activities to enable implementation of biodiversity conservation goals are as follows:-

- > Identification of biological diversity components through research and compile inventories to improve biodiversity conservation.
- > Identification of processes likely to threaten Lesotho's biodiversity.
- > Identify and implement strategies that ensure sustainable conservation of biodiversity components (PAs, RMAs, ERMA, Botanical gardens, Maboella).
- > Strengthening of legal measures.

- > Develop human resources and improve the skills required for biodiversity management.
- > Increase participation of rural households in forest activities through their own initiatives, for their own purposes and under their own control.
- > Identify and enhance management of Lesotho's unique wetland systems.
- > Reform agricultural practices in Lesotho, manage and constrain human activities that are responsible for destruction of biodiversity.
- > Perform Environmental Impact Studies prior to implementation of activities that are likely to affect biological diversity adversely.
- > Establish measures of benefit sharing.
- > Develop a material incentive program to change peoples' behavior so that future land title holders make appropriate conservation decisions.
- > Engage in international strategies that facilitate security of national and regional biodiversity components.

2.10 Biodiversity Loss in Lesotho

Recently, there is an alarming rate of over-harvesting of biological resources as ethno medicines and sources of fuel wood. Truck loads of plant medicines are seen crossing the boarder to the neighboring states and in particular South Africa. The medicinal plants that are mostly harvested and sold in the markets of neighboring states and urban areas of Lesotho are the *Alepidea amatymbica* (Lesoko), *Urginea capitata* (Moretele o moholo), *U. basutica* Moretele o mofubelu), *Pachycarpus ridigus* and *Phytolaica heptandra* (Poho-Tšehla), *Dicoma anamola*, *Teedia lucida* (Hloenya), and *Aloe polyphylla*. These are harvested to extinction by unscrupulous Basotho, acting on own account, and in some instances acting as agents of foreign biodiversity merchants. For instance, the world reckoned Lesotho true endemic, the spiral aloe has been sited in home gardens of South Africa and as far afield as in southern California, USA. (Lesotho first CBD report, 2000).

The fourth Lesotho CBD report has also reported that, lately medicinal plants are over harvested for commercial market, and in the advent of emergence of HIV Pandemic for instance, the use of indigenous herbs has intensified because of the assumed potency in managing the viral conditions, and relatively easier access associated with the herbs against the cost of conventional medication. This phenomenon has created a heavy demand on these herbs, hence their overexploitation invariably deplete some colonies completely. What then takes

place is marginalization of the species populations, which ultimately affects the species diversity, because their relatives are subsequently accessed as substitutes.

2.11 Health Providers

The Lesotho society includes a complex of “indigenous” healthcare provision as well as “western” healthcare provision. Categories of indigenous heal care include, Ngaka chitja (herbalist); Ngaka ea litaola (diviner); Ngakana-ka-Hetla who is still under training and is not generally recognized as the qualified health provider by the community but he plays a significant role as the healer; Moapostola (a Basotho form of Zionism in which moapostola establish communities of health practice); Moprofeta (another form of Basotho Zionism, generally located in an already existing religious community); Pentecostal faith healers; religious leaders and health providers from Pentecostal, Roman Catholic or Protestant denominations. Another large category is that of the Mathuela who are distinguished by their form of training and dressing. According to Motlamelle (1988), Mathuela are not originally one of the Basotho forms of healers and this is evidenced by their language which has Zulu connotations like Siya vuma, hlophe and mkoba. Marlise (2003) argued that, traditional healers are generally divided into two categories – those that serve the role of diviner-diagnostician (or diviner-mediums) and those who are healers (or herbalists). The diviner usually provides diagnosis through spiritual means, while the herbalist then chooses and applies relevant remedies. Mbiti (1991) clarified that diviner's deal with the question of finding out why something has gone wrong. They tell who may have worked evil magic, sorcery, or witchcraft against the sick or the barren. For their work, they use divination where pebbles, numbers, bones of certain animals, dice and other means are used. Traditional healers also act as counselors, rain makers, seers and priests in the society. However, colonial powers and structures have played an overpowering role in changing the cultural landscape and practices of traditional healers and their patients and have disrupted the roles played by traditional healers in the society.

2.12 Traditional Healers role in Tuberculosis (TB) treatment

The president of Lesotho traditional healers association, Mr. Liau Malefetsane reported that thousands of traditional healers are helping in the fight against tuberculosis (TB) in Lesotho. They have been trained to recognize TB symptoms such as a persistent cough and are aware of their responsibility to advice patients

suspected to have TB to get proper diagnosis. In Lesotho, when people fall ill, it is customary for them to go to their traditional healers first. Healers don't have the equipment necessary to test for TB, neither are medical practitioners. Instead of trying to treat a suspected TB patient using traditional medicine, healers are trained to refer them to the nearest TB clinic.

Traditional healers have experience in herbal and mystical remedies and they live by their trade of treating the community. Healers have a strong incentive to forego the revenue they would earn if they tried to treat the patient themselves, because they recognize that if clinical TB treatment is delayed, the disease can be fatal.

2.13 Traditional healers and HIV/AIDS

Traditional healers provide a substantial proportion of health care in resource-poor settings, including countries with high burdens of HIV in the sub-Saharan Africa. Traditional healers have played many roles in HIV care, but some biomedical providers view them as obstacles in providing HIV treatment. The study that was conducted by Furin (2011) in two districts in Lesotho showed that traditional healers provide a wide range of HIV services prior to the anti-retroviral (ART) rollout. Traditional healers took on a variety of roles in the ART rollout, including HIV prevention activities, HIV testing, monitoring patients, and participating in joint learning sessions. The study further concluded that traditional healers can provide a variety of community-based HIV services and are not obstacles for advancing care in the communities they serve. According to Mills et, al. (2006) there is now mounting evidence of the importance of traditional healers in the management of the HIV/AIDS epidemic, although poorly researched and understood, and to reduce the impact that some traditional healing interventions may play part on the spread of HIV/AIDS and unsafe treatment of infected patients. While there are few collaborative projects between traditional healers and biomedical health providers, there is an enthusiasm on the part of traditional healers to collaborate and learn from their western-trained counterparts. Burnet et, al. (2007) also revealed that there was more support for collaboration among traditional healers than among formal health workers. Both traditional healers and formal health workers have significant and complementary roles in the field of HIV/AIDS in Zambia, but there is much debate concerning the relationship between them.

2.14 Lesotho Science and technology Policy (STIP) Objectives

1. To foster a stronger S&T human resource base
 - > Sustain relevant and accessible S&T programs of learning and advocacy in technical, vocational and science-based disciplines;
 - > Accord high priority to S&T education, funding and research;
 - > Appraise the education system and devise a funding scheme for S&T training and research programs;
 - > Set up plan to regularly upgrade critical S&T supplies & equipment for research laboratories, textbooks and journals for schools and universities.

2. To develop a culture of Innovation for technological production
 - > Develop and promote S&T support network and activities targeted to entrepreneurs and SMEs;
 - > Enhance and diversify the export base; Provide cost-effective technical support to entrepreneurs and enterprises from production to marketing stages;
 - > Set up and nurture a national S&T innovation system and network;
 - > Facilitate access to national, regional and global S&T information networks.

3. To create job opportunities and poverty reduction through the use of S&T initiatives
 - > Build maximum synergy, cooperation and coordination between and among S&T users and R&D institutions;
 - > Undertake R&D and diffuse technologies that would improve quality of life;
 - > Ensure participation of women in S&T management, teaching, learning, R&D, etc.

4. Build a vibrant information society
 - > Take proactive approach to knowledge acquisition and information dissemination in line with the ICT policy, with a view to build a strong knowledge-driven economy.

5. Promote and commercialize indigenous knowledge systems
 - > Safeguard the indigenous knowledge systems;
 - > Where possible, convert these to innovative products and services for both domestic and global markets.

2.15 Intellectual Property Rights in Lesotho

One of the greatest challenges facing the Country is the management of the Traditional Knowledge Systems especially traditional medicine, due to lack of a regulatory framework. Important components of IK-Systems such as Intellectual Property Rights (IPR) and Access & Benefit Sharing (ABS) have no policies that safeguard them. The Industrial Property Order, 1989 and Copyright Order, 1989 do not address the issue of IK systems directly such that it becomes almost impossible for one to protect his/her indigenous knowledge. For instance, in a personal communication with Eric Maliehe, Traditional Herbalist and Author of the Medicinal Plants of Lesotho (2001), he mentioned that patenting one of his medicinal preparations took some time. This, he attributed to lack of a clear regulatory framework and the mistrust the Western Trained doctors have towards the Traditional healers and the lengthy procedures of the process.

The industrial Property Order of 1989, Part II under matters excluded from patent protection has the following sections which totally exclude Protection of indigenous knowledge.

4.2, (b) “Plant or animal varieties or essentially biological processes for the production of plants and animals, other than microbiological processes and the products of such processes”;

(d) “Methods for treatment of the human or animal body by surgery or therapy, as well as diagnostic methods practiced on the human or animal body. This provision shall not apply to products for use in any of those methods”.

2.16 Nagoya Protocol

In a personal communication with Mrs. Rammoko on the Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization. She pointed out that they have submitted a concept note to UNEP to assist the country to get funding from GEF; to assist in the ratification of the protocol.

2.16 Indigenous Knowledge systems applications

The use of indigenous knowledge in innovative development has led to the number of surprising successes. The use of indigenous knowledge systems has demonstrated positive results in the field of: Land and Water Resources

Management, Use and Conservation of Genetic Resource Materials, Use of indigenous knowledge on medicinal plants (Hambly and Angura et al, 1996; Mendoza and Luning, 1997; Salas, 1996; Leonti, 2003; Scheinman, 2000; Tshabalala 2005.

3. Methodology

3.1 Introduction

The study was carried out in the seven lowlands districts of Lesotho. The study comprised of two sets of questionnaires. The first one targeted the traditional healers whilst the second one was directed to the beneficiaries of traditional medicine who were basically the households living in the villages with the traditional healers. Since not all Traditional healers are registered with the healers association of Lesotho, they were identified with the help of the chiefs who are custodians of culture in the villages. The questionnaires were piloted in three districts and these were done along with the Focused Group Discussions. Departments and Civil organizations linked to traditional medicine, access and benefit sharing and intellectual property rights were interviewed as key informants in this study.

3.2 Questionnaire Survey

The structured questionnaires used for the traditional healers had four major components: these were: household characteristics (i.e. marital status, sex, family size, education and employment). The second component was on sources of knowledge, access and benefit sharing. The third on the ability to cure diseases including HIV/AIDS and the fourth component checked Biodiversity issues, policy and the enforcement mechanisms. A total of ninety one traditional healers were interviewed. The second questionnaire on beneficiaries had three major categories: the first referred to household characteristics, as in the first questionnaire, followed by the assessment of the communities' use and confidence in the traditional healers. The last one centered on the policy and modernization of traditional medicine. One hundred and eight beneficiaries were interviewed.

3.3 Focused Group Discussion

Focused group discussions conducted in the three piloted districts were composed of 8 – 12 people selected from a number of villages. The group was composed of traditional healers; people involved in initiation schools and the village councilors. The discussions were mostly dominated by the elderly people with their age ranging from around fifty to eighty. The highest percent of the participants were males. These people were identified and invited by the area chiefs. Discussions were on; sources of traditional medicine knowledge, preservation of traditional medicine, promotion of such traditional medicine (awareness), cases of access and benefit sharing, interaction with the modern doctors and ways in which their knowledge could be protected. A total of three focused group discussions were conducted.

3.4 Key Informants Interviews

The departments and civic associations which have their core business related to traditional healers and medicine, intellectual property rights, Access and benefit sharing, HIV/AIDS and consumer protection were identified and visits were made. The Government departments which were visited are as follows; Department of Parks (CBD), Department of environment (ABS), Law office (IPR), Science and Technology (Traditional Knowledge system policy) and Parliament Portfolio committee on HIV/AIDS. The civic associations that were consulted were: Consumer association of Lesotho, Traditional doctors association of Lesotho and Lesotho network of people living with HIV/AIDS (LENEPWHA).

3.5 Data Analysis

The data collected from traditional healers and beneficiaries were coded and analyzed using SPSS version 19. The analyzed information was presented in the form of illustrations, frequencies, percentages, tables and charts

4. Results & Discussion

4.1 Age

Most of the traditional healers range within the age group of 46-55 years (26.4%). They are within this range because it is at this stage whereby they have completed necessary rites of passage, notably initiation school. These are followed by those who are around 36-45 of age (23.1%) who also constitute a reasonable number, thus in most cases these are newly inaugurated traditional healers. Although the age groups 56 – 65 and 66+ constitute lower percentages of 17.6% and 16.5% respectively, these groups are highly trusted by the community due to the experience they have acquired and the number of doctors they have trained. Thus at this age their decisions are credible based on their maturity level.

Table 1: Educational standards attained by traditional healers and beneficiaries

Education	Traditional And with no formal schooling	Primary	Secondary	High	Tertiary	No response
Traditional Doctors N= 91	23.1%	56%	14.3%	4.4%	2.2%	0
Beneficiaries N=108	3.7%	6.5%	41.7%	25%	13%	13%

A significant number of Basotho traditional doctors have only gone up to primary level - 56%; Table 1 also shows that, 23% constitutes those who have not been to formal school and another 14.3% from this group have only attended traditional school. This group possesses indigenous knowledge gained from initiation

school and their elders while still tending livestock. The beneficiaries interviewed in this study were ordinary Basotho, randomly selected from the population and these data could be depicting the educational levels of the Basotho people especially those in the rural areas as the study covered mostly the rural areas. Therefore the greatest number of the rural population have gone up to secondary school (41.7%) followed by high school (25%) and tertiary with 13%. The study therefore reveals that the majority of traditional healers are below the formal educational level of the country.

4.3 Sources of knowledge

Most people who are traditional healers have acquired the knowledge from their ancestors (34%) through the process of “HO THOASA”. This is a situation whereby an individual receives instructions from his ancestors while asleep. These instructions are well packaged and will include the traditional healer who will train that individual on the use and other rituals concerning traditional healing and the sacred place where such rituals are supposed to be performed during the training. This is more common with mathuela category of healers. The same percentage acquired the knowledge from their elders who taught them on the use of medicine; usually, these are people who have been employees of the traditional healers and they have acquired this knowledge through being sent out to fetch herbs or medicinal plants and animals. Besides those who acquired their knowledge from being shown by their ancestors, the healers who would train them, the study revealed that there is another category with 28% who never went for training but received it directly from their ancestors.

4.4 Knowledge Sharing

The majority of the traditional healers (75%) are willing to share their knowledge with other people with a charge. Normally these are people who come to them either voluntarily or through a calling by their immediate ancestors. To obtain the training, more than 28% obtained the knowledge without a cost. In most cases this revolved around the clan usually to the most trusted and disciplined members in the family clan. Although more than 24% gained their knowledge through paying money, it is compared to more than 19% who acquired it through giving livestock as payment; but the baseline for payment in livestock is usually a cow, calculated in monetary terms.

Table 2: Knowledge sharing and costs on training

Willingness to share knowledge with other people				
yes, free of charge	yes, but at a cost	no	no response	
8.8%	74.7%	13.2%	3.3%	
Reasons for not sharing				
not applicable	avoid competition	retain knowledge as family treasure	Personal	no response
74.7%	2.2%	7.7%	8.8%	4.4%
Cost incurred during training				
not applicable	nothing	money	Livestock	no response
25.3%	28.6%	24.2%	19.8%	2.2%
Cost charged by traditional healers on clients				
not applicable	money	livestock	Others	no response
22.0%	37.4%	35.2%	2.2%	3.3%

In the past, before the advent of money economy, livestock was the mode of payment hence the reason why traditional payments such as lobola are still quoted in livestock terms. However, some traditional healers, especially the elderly ones, who still value their tradition demand for payments to be done through livestock. More than 13% are adamant that they cannot share their knowledge and more than 8% cannot share the knowledge for personal reasons while more than 7% are avoiding competition from their trainees.

4.5 Traditional Healers capacity on various and the perception about HIV/AIDS

Table 3: Competence on various diseases and perception of HIV/AIDS

Capacity to cure diseases	
Respiratory diseases	79.1%
Digestive diseases	78.0%
Mental diseases	70.3%
STDs	81.3%
HIV/AIDS Perception	
Believe in HIV/AIDS existence	56.0%
Do not believe in HIV/AIDS presence	26.4%
Not sure of HIV/AIDS	15.4%

In all the diseases listed above and other illnesses, more than 70% showed competence in curing those diseases. The highest, (81%) showed ability to cure sexually transmitted diseases. Table 3 above, indicated that 56% are aware of the existence of HIV and AIDS. However, in Lesotho it is highly important to note that 26.4% are totally denying the existence of HIV/AIDS and 15.4% are not sure. These numbers are highly significant considering the alarming rate of infection in the country. Lesotho is now estimated at approximately 23% of the adults infected to be aged between 15-49, and that, 57% of all the infected are females (UNAIDS, 2005). Thus, this cannot be left unchallenged, because this indicates a risky situation. The study revealed that the majority of these healers who deny HIV/AIDS existence or are unaware of HIV/AIDS, classify it as one of the sexually transmitted diseases such as syphilis, gonorrhoea, or mahae, (a disease which is associated with someone who had sex with a woman whose husband has just passed away and is still in her mourning gowns). This could be one of the reasons why modern doctors consider them deceiving and misleading in the provision of primary health care. Ignoring the existence of traditional healers who are still in denial or ignorant could be fatal to the society as they are the first to be consulted in the community whenever people fall sick.

4.6 Traditional healers Relations with Modern Doctors

Table 4: Traditional healers' relations with modern doctors

Forums attended with modern doctors					
0	yes	no	no response		
1.1%	17.6%	75.8%	5.5%		
Modern doctors' confidence in traditional healers					
not applicable	extremely	partly	very little	not at all	no response
74.7%	1.1%	7.7%	5.5%	7.7%	3.3%
Involvement of traditional healers by the modern doctors in patients' treatment					
0	yes	no	no response		
3.3%	3.3%	73.6%	19.8%		

Almost 75.8% clearly showed that they have not had any forum with modern doctors. There are no joint efforts made to share information on diseases as indicated on table 4 above; that 73.6% also pointed out that they are never consulted by the modern doctors in disease curing. This was echoed by the president of Lesotho traditional healers association, Mr. Malefetsane Liau during a Key Informants Interview. He showed that they are never consulted in any way by their modern counterparts to demonstrate their knowledge in the field of

medicine. This situation is different with what happens to the neighboring country of the Republic of South Africa, whereby both traditional healers and modern doctors do have forums where they could share information. This absence of consultations with traditional healers is a clear indication that modern doctors in Lesotho have a negative attitude towards traditional healers. Although there is a contradiction, as some traditional healers indicated during the focused group discussions that, they are sometimes consulted by the modern doctors; when they seek promotions or good fortunes, they normally come to traditional healers covertly. It is highly likely that the 1.1% and 7.7% who showed that modern doctors have extreme and partial confidence respectively in them are those that are consulted by the modern doctors in this fashion.

4.1.7 The impact of traditional medicine on biodiversity

More than 86% of traditional doctors admitted to being faced with declining plants and animals used in the preparation of medicines. As stipulated in Lesotho fourth Biodiversity report, with the emergence of HIV Pandemic, the use of indigenous herbs has intensified because of the assumed potency in managing the viral conditions. Many of these herbs are harvested from the rural areas, usually smuggled, and sold in the urban areas where they are in high demand by the city dwellers. The reason for this is that most of the people in the towns have migrated from rural areas and are still attached to their traditions and still consult traditional healers for medicine. It emerged during the Focused Group Discussions that this uncoordinated harvesting is done by people who are not licensed healers but grew up in the villages and are familiar with the herbs. It was further indicated that they often use spades hence removing everything that would allow the plant to re-grow. Healers normally use small, sharp implements which allow the plants to grow. In an attempt to counteract this erosion of herbs and animals, the Ministry of Tourism, Environment and Culture has embarked on massive campaigns to educate traditional leaders, community councilors and traditional healers on environmental conservation. Currently, 50.5% have shown that, they do not wait for plants to grow before harvesting them, while 39.6% have shown that due to the education they received and the campaigns conducted by environmental officers, they do wait for plants to reach maturity and they have engaged into the process of having their own community botanical gardens.

4.8 Legislation and Enforcement of the Indigenous Knowledge System

More than 92% of Basotho traditional healers believe that IK should be legally protected. Lesotho, like any other country, has its own traditional healers system which date as far back as pre-historic period; in fact, this is part of their culture. But this art is not legally protected. Although there is the Industrial Property Order, 1989 and Copyright Order, 1989; the two acts do not explicitly spell out, to what extent traditional healers are protected by law within the country. These traditional healers are only recognized by their traditional chiefs in the villages. There is a wide spread fear that as time goes this valuable art might face extinction.

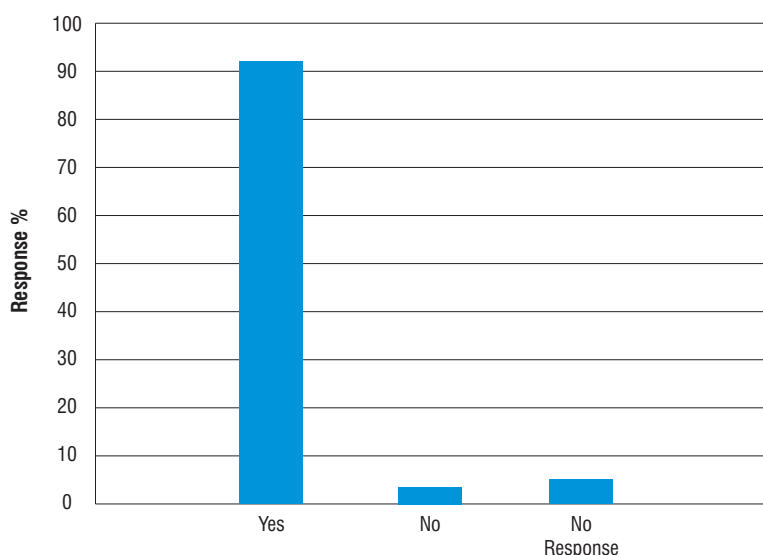


Figure 1: Legislation on traditional medicine

Furthermore, 85.7%, agree that, community based leaders must be given adequate training on enforcing policies governing traditional healers. This also came up during the focused group discussions that some chiefs and community councilors connive with the city street vendors who bribe to smuggle some herbs from the villages. This sentiment extends further to the police men. Before policies are formulated, traditional medicine men indicate that these policymakers should have an induction course on Indigenous Knowledge System (IKS). About 90% of the traditional healers also agreed that the Police Service must also be trained on IKS policy and legislation so that they are enlightened to enforce it.

In general, 89% of traditional healers agree that, the policy makers and the community at large should be sensitized or educated about issues of policies

surrounding Indigenous Knowledge System. They strongly believe that if the community is aware of issues related to intellectual property rights and access and benefit sharing so that the natural resources like the biodiversity are used to the advantage of all. This will make it impossible for those who may try to manipulate the system. This includes: bogus traditional healers who are not only affecting the biodiversity, but are also killing innocent lives through maladministration of wrong herbs.

4.9 Traditional healers' consultations by the society.

The results as shown in figure 2 below indicate that more than 47% of the people interviewed have never been to the traditional healers in 2010. However, more than 50% had consulted the traditional healers with the majority being there four to five times. This is in line with what Gawans, 2005 said at the Common African Traditional day that Africans have relied on traditional medicine since time immemorial and still remains the mainstay of primary health care for the majority of those in the rural areas in Africa. This is partly because of lack of access to health care and services but also because of traditional belief systems.

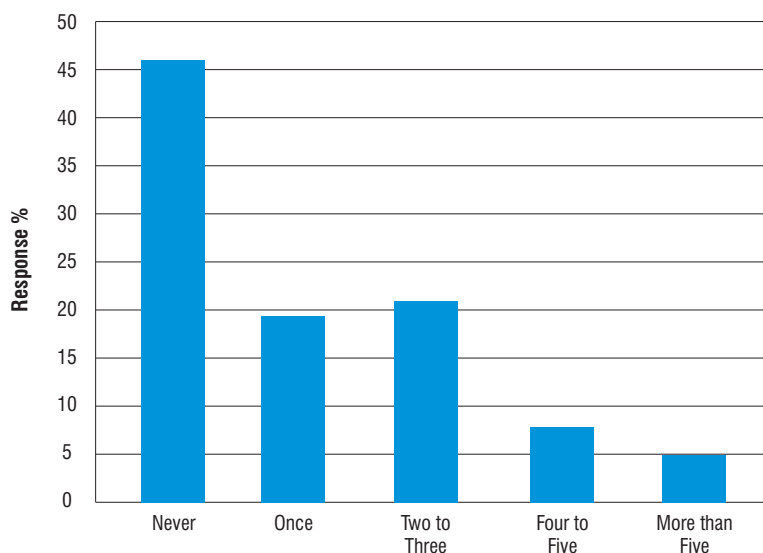


Figure 2: Frequency of visits to the traditional healers in 2010

However, the study indicated that more than 73% have modern clinics near their homes and 80% showed that they take less than an hour to reach the modern clinic therefore lack of access to health care services does not probably apply but belief in traditional medicine is apparent as more than 60% agreed that they go to

traditional healers because they believe in traditional medicine. WHO estimates also show that about 80% of the African population reverts to traditional medicine when taken ill.

4.10 Modernization of Traditional Healers

The results as shown in figure 3 below indicated that more than 90% of the respondents supported modern packaging of traditional medicine. These findings are in agreement with what was discovered in Nigeria that packaging, which enhances attractiveness and also increase shelf life, was not only appreciated by the usual low class customers of traditional medicine but attracted upper class consumers (M2 Magazine 2010). It has also been observed in Lesotho that packaging of traditional medicine in a modern way attracted people from all classes. Mrs Mamotlatsi Dlankamandla is one such traditional healer who has modernized her surgery such that it operates like a modern clinic. Her well packaged products are not only sold at her surgery but also around the country and beyond the borders of Lesotho.

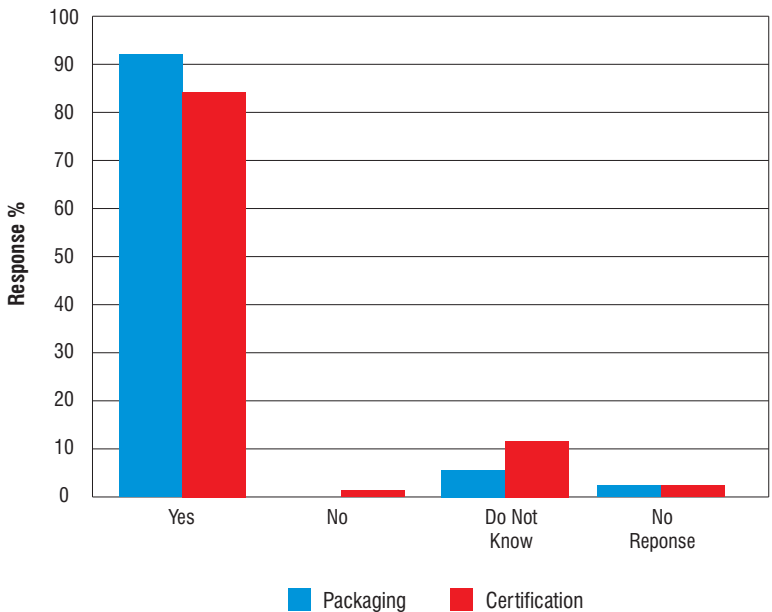


Figure 3: Modernization of traditional medicine

She has more than 50 employees around the country and she is one of the potential sponsors of a number of activities in the country. More than 86% agreed that traditional healers should be certified by the traditional healers association.

Certification of traditional healers is done by the association of traditional healers, but this does not justify that people who are not registered and certified with the association cannot practice as traditional healers. Therefore, if there is no policy and the enforcement of that policy, registration and certification with the association will not help.

5. Conclusions & Recommendations

The existence of traditional healers and the influence they have on the day to day lives of both the rural and urban communities cannot be overlooked. Traditional medicine is one of the oldest concepts that people have been surviving on. There are quite a number of traditional healers international and regional declarations, strategic plans and conventions that African countries are party to, but very little has been done to implement them, protect and improve the knowledge. In the era of HIV and AIDS and other hard to cure diseases, the knowledge is being taken advantage of for the purposes of self enrichment by people who are not healers at all. This does not only pose a threat to biodiversity and the lives of the people but also robs the people money/resources that could have been spent on qualified traditional healers or modern doctors.

Traditional healers do have an association which is also responsible in giving out certificates to the healers. It must be noted that; certificates are not awarded on the basis of competence and there is no thorough scrutiny on the credentials of the individual before being awarded a certificate. This is simply done to increase the membership of the association to sustain it through the fees that is paid for registration and annual subscription. Therefore, it is important that a standardized competence test is offered to the healers before being registered with the association and practicing traditional healing. It is also recommended that only certified traditional healer's clerks should be allowed to harvest the herbs in the villages.

The impact of uncoordinated harvesting of medicinal plants is a serious concern to the environmentalists and the communities as a whole. Medicinal plants are being harvested at an alarming rate despite the enactment of environment act of

2009. It is also recommended that every traditional healer must have a botanical garden in his yard or field which will be protected by law from any form of intrusion. Another recommendation is that; the medicinal plants being sold should be done by the people licensed by the traditional healers association and this activity must be governed by the association. Again, traditional medicine should be sold in decent buildings or shelters just like the modern pharmacies. As it has been shown from the results that beneficiaries would prefer to have traditional medicine well packaged, it is therefore recommended that traditional pharmacies are guided by people trained in the preservation and canning to have their medicines properly and hygienically packaged. This is already being practiced by some traditional healers in the country and the rewards are astonishing and there are quite a number of healers modernizing of their businesses; but the quality and safety of their products is one area that must be researched on.

It is shocking to discover that the majority of traditional healers either do not believe in the existence of HIV and AIDS or are not sure about it. This calls for immediate intervention by all the stakeholders dealing with HIV and AIDS, as traditional healers are also regarded as community leaders commanding much respect from the society. Their lack of knowledge about the disease holds serious problems for the community and the people they serve. Negligence by the modern doctors may be observed as one of the factors contributing to their ignorance. It is, therefore, recommended that the medical council of Lesotho Doctors and the Nurses Association of Lesotho should find a way of conducting awareness campaigns for the traditional healers on serious illnesses like TB and HIV and AIDS. This must be done in such a way that it will not infuriate traditional healers otherwise that initiative will fail. This will make the doctors' job easier as some people spend most of their time consulting traditional healers on illnesses that they don't have capacity to diagnose and cure.

On the overall it has been observed that legal instruments (Industrial Property Order of 1989 and copyright order 1989) addressing intellectual property rights are silent on traditional knowledge especially traditional medicine. Therefore it is also important that existing laws are either amended to accommodate the protection of traditional knowledge or a different piece of legislation be drafted to address IP on traditional knowledge system.

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