

The Role of Indigenous Knowledge in the Provision of Health Care in Malawi

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ABSTRACT Malawi has rich indigenous knowledge (IK) but lacks coordination processes to promote utilisation of IK in economic development. Indigenous Knowledge Centre (IKC) was established in 2009. IKC's goal is to compile, preserve, manage and promote IK; and strengthen Science, Technology and Innovation (STI). This paper looks at innovative methods to harness IK in healthcare provision in Malawi where some people resort to traditional healthcare because modern hospitals are inaccessible; lack drugs, personnel and laboratory equipment; and staff are presumed to ill-treat patients. Malawi's maternal mortality is 984 maternal deaths per 100,000 live births. Traditional Birth Attendants (TBAs) are discouraged from using medicinal plants because they cause ruptured uterus, a major cause of maternal mortality. Hospital records show that TBAs delivered at least 1,100 babies per month. The study by the IKC found that trained TBAs were still using medicinal plants. A total of 107 plant species were used in pregnancy and 128 for under-five cases to treat different ailments. Most of the medicinal plants were administered without dosage guidelines. Although TBAs were banned from practicing, some trained TBAs were still assisting pregnant women to deliver. Those that were afraid delivered with the assistance of village elderly women. Because modern and traditional healthcare systems operate side by side, there is a need to integrate the two systems. Medicinal plants need to be analysed; safe dosages established and toxic plants identified to guide evidence-based policies.

INTRODUCTION

As has been the phenomenon worldwide, some of the indigenous knowledge has been the basis for technological development. About 25-50 percent of the modern drugs are derived from indigenous knowledge collected from ethnobotanical studies (Davis 1995). Well known examples are Aspirin, derived from *Filipendula ulmaria*; quinine, from *Cinchona officinalis*; and digitalis or digoxin, from *Digitaria purpurea* (Cotton 1996; Pei 2001; Balick and Cox 1996). Indigenous knowledge is also important to policy makers because it highlights potentially valuable resources, their uses and traditional utilisation and management methods (Balick and Cox 1996; Alcorn 1995). In the case of species of medicinal value, IK information provides an overview of healthcare problems prevalent in an area (Cotton 1996). The knowledge is also useful in biodiversity conservation and environmental management.

There is evidence that countries that have used IK innovatively have made strides in socio-economic development. In India, several

medicinal preparations and surgical procedures were developed through traditional medicine system known as Ayurveda (Dwivedi and Dwivedi 2007).

Despite indigenous knowledge's importance in Science, Technology and Innovation (STI), little has been documented in Africa. Most of the knowledge is passed orally from one generation to the other and it involves memorising hence it easily gets distorted (Balick and Cox 1996; Prance 1995; Kokwaro 1995; Msonthi and Magombo 1983).

Status of Indigenous Knowledge in Malawi

Malawi has 13.1 million people of which 6.7 million are females [National Statistical Office, 2004]. It is the thirteenth poorest country in the world with 64.3 percent of the population living below the poverty line of 41USD cents per person per day (Benson et al. 2002). Around 70 percent of the population live in rural areas. Despite being socio-economically poor, Malawi, like all African countries, has rich indigenous knowledge base which has sustained people for thou-

sands of years. Malawi has about 6,174 plant species, 4,000 animal species, 500-1000 fish species (Environmental Affairs Department 1998). These species are culturally important and indigenous knowledge revolves around them.

In agriculture, exchange of seeds and knowledge on use and propagation methods has facilitated distribution of genetic resources within and between geographical regions (Environmental Affairs Department 2010). In terms of health-care, IK plays an important role because most rural communities consult traditional healers for primary healthcare.

Despite IK being important, it has not been adequately documented. Although most studies have focussed on traditional healing system, there have been little efforts to analyse chemical properties of the medicinal plant species. There is no coordination process to promote utilisation of IK in economic development. Malawi also lacks legal framework with respect to IK. Traditional healing is not regulated by any legislation and is not recognised officially. Efforts have been made to harmonise traditional and modern healthcare delivery systems. A code of ethics for traditional health practitioners, a draft Traditional Health Practitioners Bill and traditional medicine policy have been prepared. The policy aims at preserving indigenous knowledge and promoting traditional medicine research in order to increase capacity in production of traditional medicine (for local and export market) and industrial development (Environmental Affairs Department 2010).

Contribution of Indigenous Knowledge to Maternal Health Care in Malawi

Maternal mortality is one of the global pressing issues and the most affected are developing countries. Millennium Development Goal (MDG) number 5 aims at reducing maternal mortality ratio by three-quarters by 2015 (The Health Foundation Consortium 2007). However, the average annual decline is less than half, at 2.3 percent, of what is needed to achieve MDG target for reducing maternal deaths by 5.5 percent (Anyangu-Amu 2010).

In the context of Malawi, under-five child mortality rate is 140 deaths per 1000 children while maternal mortality rate is the worst among all non-conflict countries in the world. The latest census data states that maternal mortality

for Malawi is around 984 maternal deaths per 100,000 live births (National Statistical Office 2004). 16 women die daily from childbirth and pregnancy-related complications (Santorri 2010). Locally, pregnancy is referred to as '*pakati*' (between life and death) or *matenda* (sickness) implying that pregnancy is risky (Rosato et al. 2006). Government established Safe Motherhood Programme in order to reduce maternal and child mortality through, creating awareness of the risks of pregnancy and the need for utilizing conventional health services. Government has also made substantial investment in the health sector to enable people access medical facilities. Although 80 percent of the population of Malawi lives within 8km radius of a primary health care facility, most of the government facilities lack drugs, medical staff and laboratory equipment (Malawi Government 1993). Sufficient resources are available in private hospitals but the charges are exorbitant; hence majority of the people cannot afford. Most of the rural population rely on traditional medicine for solving primary health care problems. The people also shun hospitals because their staff are perceived to be rude (Maliwichi-Nyirenda and Maliwichi 2009). Hence Traditional Birth Attendants (TBAs) are maternity service providers at community level.

Realising the importance of TBAs, Malawi government embarked on a programme which aimed at training active TBAs. The trained TBAs were discouraged from using medicinal plants because of the belief that medicinal plants cause ruptured uterus, one of the major causes of maternal mortality. All trained TBAs received delivery kits comprising items useful during child delivery such as mackintosh, basins, cotton wool, eye ointment, razor blades and plastic apron. These were replenished whenever government had sufficient funds.

Seeing that maternal mortality rates were still high, the government decided to ban TBAs from practicing in 2007 under the pretext that they were using traditional medicine which was contributing to the high maternal mortality. After the ban was implemented, every pregnant woman was expected to deliver at a modern hospital. Seeing that there is still no reduction in maternal mortality, government decided to lift the ban in mid October 2010. However, the Association of Obstetricians and Gynaecologists in Malawi are against the decision arguing that TBAs lack technical know-how (The Nation 2010).

This paper looks at innovative methods to harness IK in healthcare provision in Malawi where some people resort to traditional health care because modern hospitals are inaccessible; lack drugs, personnel and laboratory equipment; and staff illtreat patients. Specific objectives include:

- Assess accessibility of health care services
- Document medicinal plant species used in health ailments

MATERIAL AND METHODS

Study Area

The study took place in Traditional Authorities (T.A.s) Mabuka and Nkanda in Mulanje

District, South of Malawi (Fig. 1). Mulanje has a population of 429,022. Of these, 417,930 live in rural areas and 227,919 are females (National Statistics Office 2008). T.A. Mabuka is located closer to Mulanje District Hospital but far away from Mulanje Mountain while T.A. Nkanda is far away from the district hospital but closer to Mulanje Mountain. Mulanje Mountain, also known as Mulanje massif, is rich in plant diversity (estimated at more than 800 species, of which 57 are endemic, 1 endemic subspecies and 4 endemic sub varieties) (Chapman and White 1970). People living in villages adjacent to the forest reserve substantially use the resources in various ways such as provision of water, brushes/brooms, honey, firewood, poles, thatch grass, employment (for plank carriers), casual labour (in Forestry Department), business (curio sell-



Fig. 1. Map of Malawi showing the location of Mulanje District (Google 2016)

ers), bush meat, household utensils, furniture, bamboo baskets, fruits, mushrooms, yams, insects, vegetables, medicinal plants and their extracts (Probyn 1998; Dudley 1999). The majority of the people of Mulanje are subsistence farmers and they work in tea and coffee estates.

Data Collection

a) Focus Group Discussions

Four focus group discussions were done in the local language (Chewa) by trained enumerators surrounding with local communities, traditional healers, traditional birth attendants; maternal and child health staff of Mulanje District Hospital and Mulanje Mission Hospital. The issues discussed included: accessibility of healthcare delivery services, and list of plant species used to treat maternal and under-five child diseases.

b) Ethnobotanical Inventories

Plant species used as medicines among pregnant women and under-five children were documented by enumerators in their vernacular names. For obvious species, they were identified into scientific names while in the field. Voucher specimens of the plant species that could not be identified on-site were collected for further identification at the National Herbarium and Botanic Gardens of Malawi in Zomba.

RESULTS

Four focus group discussions were carried out in T.A. Mabuka and Nkanda respectively. Each focus group discussion was carried out in a separate village with a different group of participants. The average number of participants in the focus group discussions were 10. The discussion with the highest number of participants had 12 participants whilst the one with the lowest number of participants had 8 participants.

Accessibility of Healthcare Delivery Services

There are two main referral hospitals in Mulanje district namely Mulanje Mission Hospital (also known as Ulongwe hospital) and Mulanje District Hospital. These are owned by Ministry of Health (MOH) and Church of Central Africa Presbyterian (CCAP) respectively. In addition, there are twelve health centres and thirty dispensaries spread across the district. These are

owned by the MOH, tea estates and churches. The health facilities that are owned by the churches are governed by the Christian Hospitals Association of Malawi (CHAM). Mulanje District Hospital is the main referral hospital for all health centres, dispensaries and the mission hospitals. In T.A. Mabuka, people have access to the district hospital, while in T.A. Nkanda, the nearest is Chambe Health Centre, as primary care facilities. Estate-owned health facilities are only accessible to employees and their dependants. Thus, in T.A. Mabuka, estate employees have access to Lauderdale and Sayama health centres, whereas in T.A. Nkanda, the population have access to Glenorchy health centre. Excluding private and mission hospitals, all government medical services are free. However, child delivery is chargeable service and the cost depends on the type of delivery. If the delivery is normal, it costs less. The cost increases if a surgical operation is made.

The study documented fifty-nine plant species these were used to treat thirty-four ailments (Table 1).

In addition to the aforementioned plant species, respondents reported that there were alternative plant species that they use when the main ones are not available. Fourteen alternative plant species were recorded in both T.A. Mabuka and T.A. Nkanda.

Utilisation of Medicinal Plant Species Used in Pregnancy and Under-five Child Diseases

Pregnancy Related Cases

The researchers documented 107 plant species used in treating diseases that affect pregnant women. The most used parts were roots (62 plant species), leaves (40 plant species), and bark (35 plant species). However, a combination of two parts was also used, for example, leaves and roots (7 plant species), roots and leaves (2 plant species), stem and leaves (2 plant species). The use of barks and roots is detrimental to the survival of the plant hence sustainable utilization is highly important (Table 2).

Under-five Child Cases

The study documented 128 medicinal plant species used for under-five cases. Stomachache was the commonly treated illness despite the high prevalence of malaria, only *Lagenaria sicer-*

Table 1: Some medicinal plant species reported to be used in treating some health ailments in Traditional Authorities Mabuka and Nkanda

Disease Medical terminology	Plant species used			
	Vernacular name	Botanical name	Local name used	Part(s)
Cough Diarrhoea	Chifuwa Kutsekula m'mimba	i. <i>Erythrina abyssinica</i> <i>Terminalia sericea</i>	i. Chizungwa i. Kaphini	i. Bark Roots or leaves
Dysentery Headache Toothache	Kamwazi Mutu Dzino	<i>Hymenocardia acida</i> Labiales Solanum panduriforme	Therutheru Mpwesamoyo Nthula	Roots Leaves Fruits

Table 2: Some of the mostly used plant species used in treating pregnancy-related cases

Plant species name	Use	Part (s) used	Preparation and Application method
<i>Mangifera indica</i> L.	Cure stomach pains	Stem bark	Soak in water and drink infusion
<i>Bauhinia petersiana</i> Bolle	Prevent miscarriage	Stem bark	Wear around waist
<i>Apodytes dimidiata</i> E. Mey. ex. Arn	Post maturity cure roots	Leaves and	Pound, add water and drink infusion
<i>Pericopsis angolensis</i> (Bak.) van Meeuwen, (<i>Afrormosia angolensis</i>)	Hasten labour	Leaves	Put in porridge
<i>Hippocratea parviflora</i> N.E. Br.	Treat infertility	Leaves	Add to porridge
<i>Hippocratea parviflora</i> N.E. Br.	Avoid miscarriage	Roots Leaves	Boil in water and drink infusion Pound, make an infusion and drink Pound and put on roof Rub and add to porridge
<i>Hippocratea goetzei</i> Loes.	Cure stomach pains	Leaves	Soak in water and drink infusion

aria was reported to be used. This scenario could be due to the fact that people normally buy malarial tablets from the grocery shops or market vendors.

Implications of Policy of Banning Traditional Birth Attendants from Practising

The study found that during the time government banned TBAs, some TBAs were still practicing. The TBAs were compelled to serve the people because the women had no alternative source of medical help. While other TBAs completely abandoned their services for fear of being fined some pregnant women were afraid of seeking TBAs' assistance. These often opted for home-based services where child deliveries were made by untrained elderly women.

Challenges Faced by Traditional Birth Attendants in Providing Maternal Healthcare Delivery Services

The effect of poverty in provision of quality maternal healthcare by traditional medical

practitioners (in Malawi), especially traditional birth attendants, is evident. Sixty nine percent of T.A. Mabuka respondents and 82 percent of T.A. Nkanda respondents confirmed that all traditional healers face problems in their profession. The problems mentioned in T.A. Mabuka, included lack of appreciation by clients who do not pay for the services received, transport problems to get to places where medicinal plants are found and scarcity of the medicinal plants, and lack of money to enable the patients afford transport to take them to referral hospitals after being referred. Other problems mentioned were:

- That traditional healers have multiple occupations such as subsistence farming hence difficult for them to concentrate on traditional healing
- Lack of permits to enable the practitioners collect traditional medicine material from Mulanje Forest Reserve
- Jealousy friends, relatives and other members of the public who make it difficult for the practitioners to succeed in their practice

DISCUSSION

The focus group discussions showed that many people go to Mulanje Mission Hospital mainly because they are better attended to by the members of staff than at MOH health facilities where the staff is alleged to be rude. The researchers found that pregnant women in T.A. Mabuka were passing Mulanje District Hospital going to Mulanje Mission Hospital for antenatal clinics and child delivery services. This conforms to findings in a prior study that stated that in Blantyre, Nsanje, Zomba, Phalombe, Chiradzulu, Mangochi, Thyolo and Chikwawa, pregnant women reported to be mocked by hospital staff during labour (Safe Motherhood Project 2001). The staff sings mocking songs, shout at the women and even hit them.

Respondents mentioned that the conventional health services are not enough because the majority of the people live near health centres or dispensaries that mostly render first aid kind of treatment. Coupled with the alleged rudeness of hospital staff, lack of drugs and equipment, and long travelling distance to main hospitals, most people resort to home-based maternal health-care. The study revealed that people consult TBAs at community level.

Collection of medicinal plant material is also a problem in Malawi particularly in rural areas. Coupled with environmental degradation, traditional medicine resources are now scarce. People have to walk or ride bicycles for long distances to get medicinal plant resources although modern hospitals are within short distances people are prepared to walk or cycle to as far as Mozambique due to poverty.

In view of the shortfalls facing traditional and modern medical healthcare delivery services, there have been some attempts to ensure collaboration between traditional healers and modern doctors. The efforts have been facilitated by Ministry of Health and Population. However, it is mainly traditional birth attendants (TBAs) who have been fully recognized since 1987 (Witte 1995).

With respect to the Traditional Medical Practitioners (TMPs), the collaboration is in terms of public health programmes particularly HIV/AIDS and *Tubercle bacillus* (TB). In such programmes, TMPs attend training workshops organized by the ministry. During the workshops, the TMPs are advised to refer patients to modern hospitals for TB diagnosis when they cough for over three weeks.

Although there is no full collaboration at the moment, most respondents were hopeful that collaboration would be an ideal way forward. This would enable the health-for-all strategy that was adopted in 1979 to be achieved. For the strategy to be realized, joint diagnosis is the most appropriate therapy as confirmed in Kandy, Sri Lanka (Aluwihare 1982; Chirambo 1987). In the context of Malawi, an effective collaboration between the two parties would be an ideal situation. The current approach is seen as top-down in that the modern doctors dictate on how the traditional healers should conduct themselves. The banning of TBAs from using medicinal plants has resulted in lack of cooperation from traditional healers (Chikuni et al. 2002).

CONCLUSION

This paper has shown that modern and traditional health care systems play an important role in maternity healthcare delivery in Malawi because there are other remote areas where the only available obstetric facility is a TBA. The study has confirmed that people use medicinal plants for pregnancy related cases due to various reasons and that trained TBAs use medicinal plants despite being discouraged to do so. Some of the contributing factors to the continued use are inevitable, for example, lack of alternatives and culture. It is therefore imperative that any policy should take into account such issues.

RECOMMENDATIONS

Medicinal plants should be analysed to establish safe dosages and identify toxic plant species. The useful plants should be encouraged while toxic plants should be discouraged. In case of plants used to hasten labour, further studies should be undertaken to confirm if these plants are responsible for the high uterus ruptures. Unless evidence-based and culturally acceptable policies are implemented, people will resist from cooperating; making it difficult for Malawi to achieve Millenium Development Goals.

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