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Afya Jumuishi : towards Interprofessional collaboration between traditional and modern medical practitioners in the Mara Region of Tanzania

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Chapter VI HEALTH AND HEALING IN MARA

This chapter presents the health and healing agenda in the Mara Region. Paragraph 6.1 begins by presenting the general health status of the population and the health services in Tanzania, including the Mara Region. A few selected national indicators are compared with those from one other developing country in Africa, as well as a developed European country, The Netherlands. Major challenges in Tanzanian health care are also presented with a focus on health care system reforms. The general vision of health service delivery as well as its organisation is also explained. The Paragraph also highlights some noticeable development and changes which have taken place in the Tanzanian medical systems in a timeline from the pre-colonial, colonial and post-colonial periods.

Paragraph 6.2 explains the Mara Region as a pluralistic medical configuration. The fundamental differences between Traditional Medicine (TM) and Modern Medicine (MM) are summarised in terms of worldview, focus, approach, diagnostic tools, organisations, methods and efficacy. The plural configuration in the Mara Region is presented by showing the type of practitioners, practices, methods and people's differential use of Traditional Medicine (TM), Modern Medicine (MM) or Complementary and Alternative Medicine (CAM). The major challenges to address Traditional Medicine (TM) in Tanzania are further elaborated.

The last Paragraph 6.3 presents a discussion on inter-professional collaboration efforts in health care. It starts by presenting beliefs on causes of illnesses and remedies followed by the use of medicinal plants in the region and lastly on the existing efforts on collaboration between traditional and modern medical systems. Such efforts in the Mara Region and Tanzania as a whole include, among others; referrals, meetings, conferences, working together towards safe male circumcision, and safe delivery. Further efforts include the positive development of related colleges of higher learning, formulated herbal products from the Muhimbili Institute of Traditional Medicine (TM), and the classification of common medicinal plants and their useful parts.

6.1 General Health Status and Health Services

Today, despite several health plans, policies and reforms adopted since its independence in 1961, Tanzania, as many other developing countries is characterised by a poor health status, which is also related to the overall situation of poverty. Table 6.1 presents key health indicators from the World Health Organization (2012), along with figures comparing Tanzania to other selected countries in Africa, East Asia and Europe. Such figures provide a glimpse of the relatively poor delivery of health services and health status, which Tanzania is still facing. These indicators are similarly reflected for the situation in the Mara Region, which shares the same burden of disease and faces the same health-related challenges as all regions of Tanzania.

The Report on *Health Care Systems Improving Performance* (WHO 2000a) indicates that overall ranking of the United Republic of Tanzania's in 2000 is 156 out of 191 member state countries. The ranking is based on measures of goal attainment; disability-adjusted life expectancy; health equality in terms of child survival; responsiveness level; responsiveness distribution; fairness of financial contribution; and performance on level of health. Notwithstanding, such low records do not imply that the Government of the United Republic of Tanzania is doing nothing to alleviate the situation. The *Country Health Data Comparison* (WHO 2012) over the past five years shows general positive steps in the improvement in the health care system and health status of Tanzania. Positive steps are:- steady increasing

vaccination coverage to the under five year children, reduced both Infant and Maternal Mortality Rate (IMR & MMR), increased life expectancy, and increased capital expenditure on health and training of health workers.

6.1.1 Health Indicators in Tanzania

According to the *Health Statistics Abstracts of 2010 Report* from the Ministry of Health and Social Welfare (MoHSW 2010), the health management indicators reveal, on average, that access to health services is still a problem. For example, about 40% of women still deliver babies at home without even the help of a Traditional birth Attendant (TBA). The referral system is ineffective as it only favours those people living near the health facility, while the authorities of the district hospital do not visit about 31% of all villages because they are far away. Some people still live more than five kilometres away from the nearest health centre. More than 50% of all health facilities reported that they received their drug kits late. Only 43% of non-functional equipment in health facilities was fixed or replaced within three months of reporting, signalling either resource constraint or a culture of poor maintenance.

The health facilities response rate in Health Management Information Systems is still very low and with incomplete information; such reports reflect challenges in how to collect, manage and make informed decisions based on this kind of incomplete and mostly unreliable data. The *Mara Region Health Report* (2011) shows a continuation of high rates of communicable (preventable) diseases.

Table 6.1 Comparison on some Health Indicators between Tanzania and other Selected Countries

Health Indicator	Countries in Comparison				
	TZ*	KE	ID	TN	NL
Life expectancy at birth (average)	55	60	68	75	81
Adult Mortality Rate per 1000 people	311	282	143	70	56
Infant Mortality Rate per 1000 live births	50	69	38	14	5
Maternal Mortality rate per 100,000	460	360	220	56	6
Physician Density per 10,000 People	0.1	1.4	2.9	11.9	28.6
Nursing & Midwifery Density per 10,000 people	2.4	11.5	20.4	32.8	1.5
Hospital beds per 10,000 people	7	14	6	21	47
Population growth rate (%)	2.8%	2.6%	1.2%	1.0%	.5%
Children under 5 years underweight	16.2%	16.4%	9%	6%	N/A
People with improved sanitation (%)	10%	32%	54%	81%	100%
People with improved drinking water sources (%)	53%	59%	82%	90%	100%
Total Expenditure on health as % of GDP	3.4%	4.8%	2.5%	6.0%	8%
People living on < US\$1 (PPP Int.\$) a day (%)	67.9%	19.7%	18.7%	5.87%	N/A

Key: N/A- Not Applicable *TZ=Tanzania, KN=Kenya, ID=Indonesia, TN=Tunisia, NL=Netherlands

Source: WHO (2012a) *World Health Statistics: Indicators*

According to the Ministry of Health and Social Welfare (MoHSW 2010) among the top ten frequently reported diagnoses and or causes of death among Tanzanians are malaria, anaemia, protein energy malnutrition, pneumonia, upper respiratory tract infection, diarrhoeal diseases, intestinal worms as well as (for females aged five years and above) pulmonary disorders, and obstetric and gynaecological problems

The main causes of morbidity and mortality are malaria, tuberculosis (TB) and HIV/AIDS. Malaria accounts for 30 percent of the national disease burden. In 2010, about 32 million people (76.4% of the population) were living in areas with stable malaria transmission. Incidence is estimated to be between 14 and 18 million cases per year. In addition, malaria causes between 100,000 and 125,000 deaths per year, with between 70,000 and 80,000 of the deaths occurring amongst children younger than five years. Tuberculosis and active tuberculosis infection has rapidly increased, mainly due to the HIV/AIDS pandemic. The incidence of tuberculosis has been increasing at a rate of 5-10% annually, and most cases occur in the 15-49 year age group (MoHSW 2011).

According to the *Long-term Prospective Plan* (2010) from 2011-12 through 2025-26 of the Office of the Planning Commission the major challenges facing the health care system are inadequate human resources and insufficient financing. Improved financing for the health care system is vital, especially in capital investment in order to expand health service networks while ensuring quality preventive and curative health services. Concerning the human resources in the system, the ratio of professional medical staff per inhabitant in 2010 was 1:10,000, which is below the average indicator for low-income countries with a ratio of 1.1 medical staffs for 10,000 inhabitants. In general, the *Long-term Prospective Plan* (2010) indicates the following challenges for the Government:

- governmental financial constraints;
- low capacity at local Government level in terms of the required resources;
- insufficient medicines, medical supplies, modern equipment and specialised medical staff (especially dentists, cardiologists, orthopaedists and neurologists);
- low public education regarding healthy habits;
- low health insurance coverage;
- low health service available to the poor.

It is clear that health sector system reform is inevitable, and the formation of an appropriate health policy must be made a priority in order to improve the quality of Tanzania's livelihood.

6.1.2 General Vision and Roles of the Health Care System

The Tanzanian health care system is pluralistic as it encompasses the traditional Bantu medical system, the traditional Arabic medical system, the modern medical system and the Complementary and Alternative Medical (CAM) system. While discussing the life of the people in the Mara Region, however, it is worthwhile to mention that the modern medical system has been misrepresented with unnecessary prejudice to overshadow the existing and abundant forms of Traditional Medicine (TM) which has been serving the needs of the population over many generations. In some cases, traditional healers have been despised and even been arrested (1) Even today, when discussing the medical system, the bias continued to favour modern medical practitioners and their practices at the expense of traditional medical practitioners and their services, as well as practitioners of Complementary and Alternative Medicine (CAM).

Most of Tanzania's health indicators match those of other developing countries in Sub-Saharan Africa. The first strategic health plan was developed three years after independence, in 1961. It was later updated after the *Arusha Declaration* in 1967, which had the following vision: '*The objective of socialism in the United Republic of Tanzania is to build a society in which all members have equal rights and equal opportunities; in which all can live in peace with their neighbours without suffering or imposing injustice, being exploited, or exploiting; and in which all have a gradually increasing basic level of material welfare before any individual lives in luxury*' (Nyerere 1968: 340). For health care, this meant that the emphasis was placed on spreading the health facilities to rural areas and expanding the number of health workers. Tanzania is one of the countries where the concept of community-based health care has strongly been promoted, in which village health workers and traditional birth attendants have been employed.

In the beginning, the Government discouraged private health services, except for those provided by the church, and sought to achieve free health services for all Tanzanians. As the result of economic decline and growing debt, this goal, however, has not been realised.

The health referral system of the Government reflects the pyramidal shape of a referral system, *i.e.* from dispensary to 'consultant hospital'. Through the present time, the Ministry of Health and Social Welfare (MoHSW) has formulated health policies and regulations as well as provided health services through health facilities health, programmes, projects and agencies. Apart from health services, the Ministry of Health and Social Welfare (MoHSW) spearheads training courses normally for modern medical practitioners. There are several medical training schools (government and private) for various medical personnel, such as Muhimbili, Tumaini, Machame, Mbeya, Musoma, Bugando, and Kairuki. The aim of the Government is to train qualified and motivated medical personnel at all levels within the health care system. There is a large gap in Tanzania's health care system where there is insufficient qualified staff, especially in the rural areas. Most of the medical doctors are situated in the urban areas. Further investigation is needed to ascertain what kind of initiatives, in addition to worker incentive packages, are being taken to address this problem.

Another important issue is reproductive health. The *National Family Planning Programme* encompasses all family planning activities provided by the various agencies and is coordinated by the *Reproductive and Child Health Unit* of the Ministry of Health and Social Welfare (MoHSW). The Government had started to provide family planning services in the mid-1970s. The *Family Planning Unit* became operational in 1986, and has been gradually strengthened to its present capacity. The *Family Planning Unit* is responsible for initiating and developing family planning standards and guidelines on service provision, training and other aspects of quality care.

The Government of Tanzania coordinates the following programmes through the Ministry of Health and Social Welfare (MoHSW): *National Malaria Control Programme*, *National Child Survival Programme*, *International Trachoma Initiative*, *National Safe Motherhood Programme*, *National Tuberculosis and Leprosy Programme*, and the *National AIDS Control Programme*. The *Tanzanian Commission on AIDS* (TACAIDS) has taken a coordinating role to streamline the national HIV/AIDS programme, so the Ministry of Health and Social Welfare (MoHSW) can focus on the people's response to the health care system. The *Public Health Education Department* (PHED) is concerned mainly with identifying the prevailing health problems and disseminating to the public methods of preventing and controlling these problems. This is an integral part of community involvement in Primary Health Care. This Department of the Ministry of Health and Social Welfare (MoHSW) is often the first entry point for third parties (donors/NGOs).

The public health education system also provides in-depth training for health officers on such subjects such as *sanitation, HIV/AIDS, malaria, cholera, tuberculosis*, etc. In practice, most of the public health activities are so far implemented largely by NGOs.

Coordination between the preventative and curative Departments of Ministry of Health and Social Welfare (MoHSW) could be improved. In some districts the staff in both Departments discuss the level of activities and divide curative and preventative tasks according to the national health policy, while in other districts, a clear division in organisational structures can be observed.

6.1.3 Historical Major Changes and Impacts in Health Care

Table 6.2 shows traces of major changes which have taken place in the health sector and their impact to the people during pre-colonial, colonial and postcolonial times.

Table 6.2 Historical Health Sector Changes and their Impacts in Tanzania

Period	Dates	Situation and Changes	Notable Effects / Impacts
Pre-Colonial	100	Bantu medicine	Traditional Medical practitioners (TMPS) highly respected and included in overall community governance. Sacred and secretive health knowledge; service- (rather than business) oriented
	1100	Arabic and Islamic medicine introduced	Introduction of new health approaches, services and products
	1500	Portuguese Surgeons introduced	
	1860	French Mission doctors in Zanzibar	
	1874	British Mission doctors in Mpwapwa	
Colonial under Germany	1885	TMPs seen as witches, agents of satan and thought to clash with civilization. People were discouraged, TMPs were despised and some were arrested. Beginning of Biomedicine, Modern Medical practitioners (MMPs) and first modern facilities during the arrival of German Medical Corps at Bagamoyo in 1889.	TMPs were forced out of public community planning. Some health indigenous knowledge is lost. The Traditional Medicine system is dismantled
	1909	Issuing of certificates to TMPs on specifying illnesses they could treat and locality.	Birth of hypocritical ‘double identity’ brought confusion, a <i>Satanophobia</i> orientation and adaptation to new approaches to health services delivery, aetiology, diseases and illnesses. MMPs are more protected than TMPs
Colonial under British	1919-1961	More missionary medical facilities and mobile services	
	1929	The Witchcraft Ordinance and the Medical Practitioners and Dentist Ordinance	

Table 6.2 Historical Health Sector Changes and their Impacts in Tanzania (Continue..)

Post-Colonial	1961	Tanganyika becomes independent	Establish Ministry of Health (MoH) and Departments
	1963	Zanzibar becomes independent, then establishes its Ministry of Health (MoH)	Later Establishment of (MoH) and Departments for Zanzibar
	1964	Union (United Rep. of Tanzania) formation with separate MoH)	Research is one of the 22 items the state of Union share
	1968	The medical practitioners' and dentists' ordinance is enacted (Section 37) mentioning the native (indigenous) therapeutics	TMPs recognised but restricted in their own community and not for business
	1974	The Institute of Traditional Medicine established for research in the traditional healing system	Over 2500 medicinal plant species documented with preliminary chemical and pharmacological work
	1978	Pharmaceuticals and Poisonous Act passed	Controls and regulates possession, supply and use of pharmaceuticals and poisons
	1978	Alma Ata Declaration	International call on primary health care and promotion of healthy living
	1990	Development of health policy	Gives vision and Tanzanian MoHSW goals
	1992	Christian Social Services Commission (CSSC) established	Preparation to church-run health facilities towards health care system reforms and cooperation from the government
	1993	Introduction of cost sharing scheme to health services	Health facilities generate more revenues but the poor suffer more
	1993-2001	Health care system Reform (HSR) and Strategic Plan and System Wide Approach	Government to be a facilitator and a 'watchdog' to allow public/private mix of services
	1994-1996	Local Government Reforms Programmes (LGRP)	Comprehensive health planning and beginning of a <i>health basket fund</i>
	1998	The Tanzanian Development Vision 2025 formulated	Implementers and providers focus on objectives and target results
	1999	Shift from Health Information System to Health Management Information system	Proper use of health statistics

Table 6.2 Historical Health Sector Changes and their Impacts in Tanzania (Continue..)

Post-Colonial	1999	The National Health Insurance Fund established by Parliamentary Act No.8 of 1999	Increased access to health services by members and their dependants
	2001	Establishment of Tanzanian National AIDS Commission (TanAIDS)	Open and focused strategic plan to fight HIV infections and care for People Living with HIV/AIDS (PLWHA)
	2001	The use of Sulphadoxine – Pyrimethamine (SP) as the first line of treatment for malaria in place of Chloroquine	Reports of persistent side effects of SP to some users
	2002	Enactment of Act No. 23 of 2002 governing Traditional and Alternative Medicine Practices and products	The Association of Traditional Healers and Traditional Birth Attendants (CHAWATIATA) strengthened
	2003	Established by the Tanzania Food, Drugs and Cosmetics Act of 2003 and the Government Chemist Laboratory agency implementation of the Industrial and Consumer Services Policy	Legal enforcement (management and control) of assuring safe and quality food, drugs, cosmetics and industrial and consumer products
	2004	Beginning of the African Traditional Medicine (TM) Day celebration, now held annually on August 31	MoHSW develops a guide to train traditional healers
	2007	Enactment of different acts such as for the registration of Laboratory, Radiology, Ophthalmic, and Environment Health workers	Increased professionalism in allied health
	2007	Primary Health Care Service Development Programme (<i>Mpango wa Maendeleo wa Afya ya Msingi</i>) 2007 – 2017 and review of the Health Policy	Availability of the base (indicators) for appraisal
	2008	Enactment of the Mental Health Act as well as the Public Health Act	Much focus and many protocols concerning mental health and public health

Source: *The History of Health Care in Tanzania*, (GTZ) and *National Museum of Tanzania* (2001), Tanzania Ministry of Health and Social Welfare (2011)

Important to note here is that following the introduction of the cost-sharing scheme in 1993, although it increases income to the respective health facilities to be able to meet some of the running expenditure, the poor suffered even more as they could not afford the costs (2).

Moreover, the shift from the *Health Information System* (HIS), which was aimed at collecting and reporting data for sponsors and health office headquarters, to *Health Management Information System* (HMIS) in 1999, has been to focus on collecting accurate information to assist in the informed decisions and for planning purposes. This very robust strategy can help health service providers meet their clients' expectations, with improved health as the overall goal.

However, the procedures of collecting and analysing data remain a challenge to the modern medical practitioners amidst long and huge workloads. Another weakness in the system is that it does not incorporate data from Traditional Medicine (TM) or *from* Complementary and Alternative Medicine (CAM).

6.2 The Pluralistic Medical System in the Mara Region

6.2.1 Medical Pluralism in the Region

While the ultimate goal for both Traditional Medicine (TM) and Modern Medicine (MM) is to reach good health, there exist some differences between the two systems as shown in Table 6.3. The differences noted here constitute a collection of various definitions and analyses from different writers and researchers related to Traditional Medicine (TM) studies. While Modern Medicine (MM) focuses on human systems and organs, Traditional Medicine (TM) observes at humans holistically, with regard to one's relationship with others and the community's natural and supernatural powers, which therefore calls for different care approaches.

Table 6.3 Differences between Modern Medicine (MM) and Traditional Medicine (TM)

Modern Medicine (MM)	Aspect of Care	Traditional Medicine (TM)
Scientific, biomedical, rational, technical	Worldview	Holistic, mystical, spiritual, traditional
Disease, patient's body system and organ as an object of care	Focus of care	Illness and its causes (vertical or horizontal), relationships between people and family / community, natural and supernatural powers
Specialist-orientation application of general principles to individual situations. Control of diseases, micro-organisms and risk factors	Care orientations and approaches	Arises from the context: life way, values, beliefs, life experiences, worldviews Depends on an individual. Reconciliation between people and with ancestors / supreme being
Looking at patient history, physical examinations, radiographic pictures, ultrasound pictures, laboratory investigations, etc.	Diagnostic tools and methods	Story telling, ritual sacrifices, prayers, evoking the <i>jinn</i> , reading animal entrails, palms, balls, mirror and water, stones on a wooden board, bones, gourd rattling, seeds and sticks
Wider span of organisational structure; small, medium and big organisation; formal education	Organisation and practitioners' education	Narrow span of organisational structure; small organisation; informal education
Use of formulated industrial manufactured medicines, surgical and physiotherapeutic interventions, counselling, provision of <i>pseudo</i> organs	Cure and rehabilitative means and methods	Use of <i>material medica</i> from herbs, animals and marine products, incisions, wearing charms, prayers, exorcizing, ritual sacrifices, surgical
In relation to pharmacological property tests	Medical efficacy	In relation to perception and spiritual context

Source: Extracted from definitions and analysis by Mshiu & Chhabra (1982), Akerele (1987), Chi (1994), Scheinman (1998), Anderson (2002), Helman (2001), Juntunen (2001), Snyderman & Weil (2002), WHO (2002a), Slikkerveer (2006)

However, today in the Mara Region and in Tanzania as a whole, residents are continuously seeking to use different medical services not only from modern medical practitioners, but also from other traditional or complementary and alternative practitioners, and spiritualists, as well from self-medication.

People's consultations for health care are often taking place in a complex pluralistic configuration with the goal of reducing pain, preventing illness and promoting health, improving treatment, casting away misfortunes, using midwifery services, undergoing circumcision, finding rehabilitation, practicing family planning, seeking special dietary advice, diagnosing health problems, or embalming corpses. The culmination of meeting these goals in the Mara Region is provided by the pluralistic health care services to the people living in the situation of medical pluralism, who depend on the interaction of different personal and institutional factors relating to the patient or client.

Table 6.4 The First Preferential Choice of A Medical System where A Practitioner will Consult when in Need of Medical Service

First medical system / intervention preferred	N	%
Modern Medicine (MM)	94	48.70
Mixed approach (TM, CAM & MM)	38	19.69
Self-care / Consult experienced clients	29	15.03
Traditional and alternative medicine	19	9.84
Wherever possible	13	6.74
Total	193	100.0

Source: Fieldwork Survey (2006)

One health care option is self-medication, which is sometimes known as the popular sector (Helman 1994). Sick people or clients in need of health services in the Mara Region have been making their own decisions or having their guardians ask fellow experienced sick people about a specific health problem. In this self-care system, no payment is done apart from goodwill.

As Angelina Biseko of Nyerere Designated District Hospital (DDH) who is an experienced midwife says on interview with the researcher in 2006: '*A primi-gravida (pregnant) woman would tend to inquire about the experiences of para-gravida friends or from traditional birth attendants in the neighbourhood as a way of preparation and dealing with common obstetric issues such as constipation, mobility problems, nausea, exhaustion, frequent urination, back and lower abdominal pain*'. In the Mara Region, self-care also includes the advice which people obtain from self-help groups, especially people living with HIV/AIDS (PLWHA). Few, mostly educated people and those with access to the Internet in the region, tend to receive much medical advice about health problems from the Internet, both before or after visiting medical practitioners.

6.2.2 Traditional Medicine (TM) in the Mara Region

Over the past few decades, there has been an escalating rediscovery of the important role of Traditional Medicine (TM) in the provision of integrated health care in communities, particularly in developing countries where modern medical practitioners and their material resources are inadequate, resulting in an unequal distribution of quality health services over the country. Societies have therefore come to rely also on locally available and less costly forms of indigenous medical knowledge and practice.

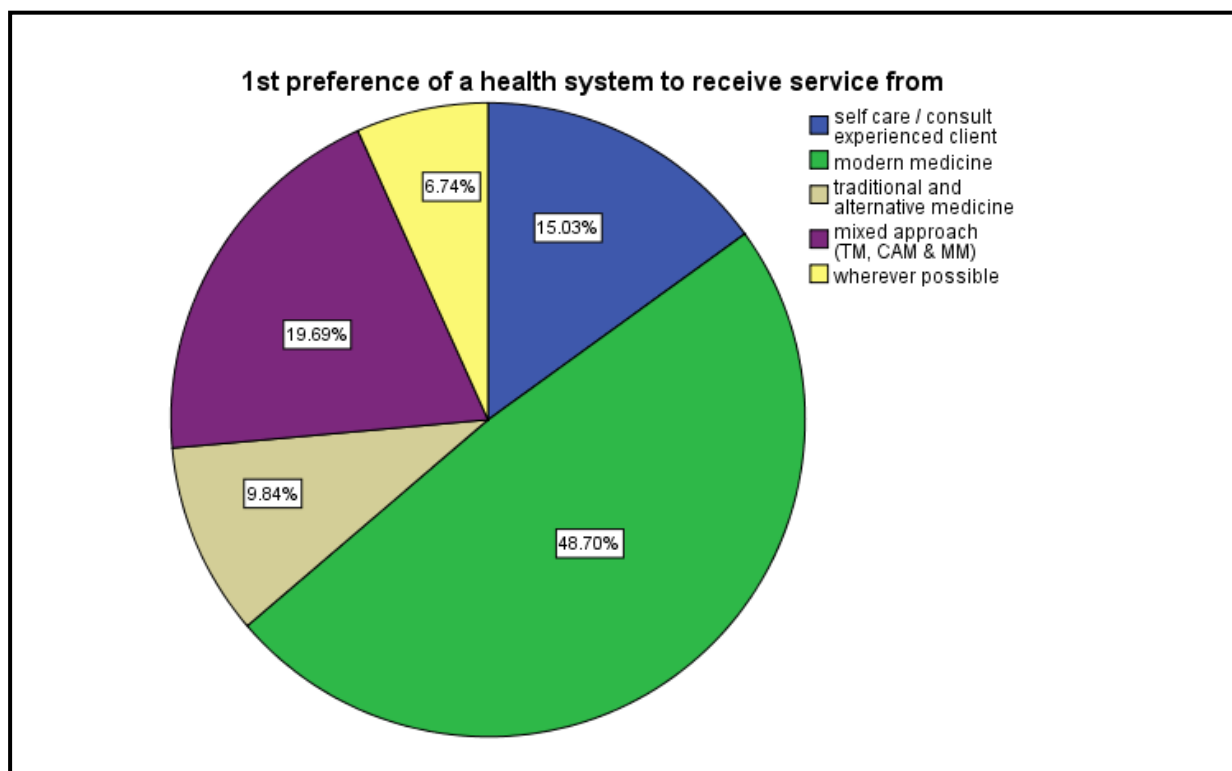


Figure 6.1 The First Preferential Choice of a Medical System where A Practitioner will consult when in Need of Medical Service. Source: Fieldwork Survey (2006)

Such rediscovery of Traditional Medicine (TM) has not only recently been initiated by scientists in medical anthropology and ethnoscience, such as Leslie (1976), Foster & Anderson (1978), MacLean (1985); Warren, Slikkerveer & Brokensha (1995), and Slikkerveer (2005, 2006), but has also been supported in the field of primary health care and community health by international organizations such as the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) which promote Traditional Medicine (TM) to be integrated into primary health care and community-based health services, such as by Bannerman, Burton and Ch'en Wen-Chieh (1983); Hargono (1989) and WHO/UNFPA/UNICEF (1992).

Within the Traditional Medicine (TM) system, people have the opportunity to consult traditional medical practitioners, including traditional healers (*waganga wa jadi*), herbalists (*waganga wa miti shamba*), traditional birth attendants and midwives (*wakunga wa jadi*), circumcisers (*ngariba*), bone setters (*waganga wa jadi wa mifupa*), fortune tellers and predictors (*wabashiri & watabiri*), and soothsayers (*wapiga ramli*). These practitioners form abundant human health resources which are still respected, especially in rural areas. The services of Traditional Birth Attendants (TBA) are the most accepted services by all practitioners as there has been a long-term collaboration between modern midwives (nurses) and Traditional Birth Attendants (TBA) through the government implementation of training strategies such as the traditional health policy guidelines of the *Tanzanian National Health Policy* (1992) and its later review.

Customarily, the costs of receiving traditional health services were often post-payments where the client would pay in goods such as cows, goats, chicken and tins or sacks of grains.

However, during the discussion and group presentations at the researcher's *Jadi na Utamaduni katika Afya* (JUA) workshops in Shirati in 2005 on their status, the healers, circumcisers and Traditional Birth Attendants (TBA) indicated that recently with increased mobility of healers and clients and moral degradation in the society, they would generally prefer a down-payment if not a pre-payment before they would provide their services.

A medical system which is not yet as fully developed in the Mara Region as compared to the Tanzanian big cities or the Western countries is Complementary and Alternative Medicine (CAM). The most prominent examples of such services in Mara include *Yoga*, a physical, mental and spiritual exercise done as a therapeutic routine, and the mushrooming of medical shops selling alternative natural products. The natural products are mixed compounds or substances derived from parts of plants, marine organisms and micro-organisms, which possess biological and pharmacological activities. While most of the herbal products are from the domestic natural resources in the country, some are imported from foreign countries, such as the *Swiss Natural Products*, the *Ebenezer Natural Products* etc. They are normally sold at a higher price than other medicines and only a few are produced by Tanzanian companies such as the *Kilimanjaro Natural Products Company Ltd.* and *Moringa Natural Products*. In order to sell these products at a lower price, some companies have introduced a system in which membership is mandatory. Such services are based on more commercial and marketing strategies such as benefits to the members for recruiting additional members, or by offering discounts for bulk purchases.

Both major religions in the region - Christianity and Islam - also continue to offer services through faith healing to people with different health problems. Both life experience and interviews with religious leaders in the Mara Region have provided the information that most clients who consult Christian leaders and evangelists are those who are suffering from chronic diseases. Christian faith healers use the Bible as their book of authority, and perform persistent prayers to Jesus, known as the 'Great Physician', to heal the sick and demon-possessed, while in the Catholic churches, sprinkling of the 'water of life' and burning of frankincense (*uvumba*) are used for the observation of the Sacrament and prayers to heaven. Muslim leaders (*Sheiks*) and teachers of Islamic schools (*Madrassa*) are also known for their healing services and the casting away of *majini* (jinn possessions) through prayers and recitings of either Koranic verses or teachings of Prophet Mohammad (*Hadith*). They also burn frankincense or olibanum (*ubani*) from a scrubby tree of species *B. papyrifera* and *B. thurifera*, often used as part of a religious purification ritual and a reminder to believers of the rewards in Paradise.

Frankincense therapies appear in the classic *Syriac Book of Medicine*, in ancient Muslim texts, and in Ayurveda and Chinese medical writings for the treatment of a variety of diseases. In general, Greek and Roman physicians, practitioners of alternative medicine and faith healers worldwide have also been using essential oils and fragrances for promoting physical, emotional and spiritual nourishment in what is known as *aromatherapy*.

The way in which people in the Mara Region prefer and select their health services is a complex function of the interaction among multiple factors of medicine consumer behaviour as Slikkerveer (1990: 60) clarifies as: '*a specific form of consumer behaviour in interactions between the individual's psychobiological system and the social system.*'

This conceptualisation links up with the 'stages of illness and medical care' introduced by Suchman (1965), while Kohn and White (1976) emphasize *perceived morbidity* as the strongest determinant in their model of health care utilisation (3). Expounding the concept of 'perceived morbidity', the perception of need of clients or patients does not lead to the use of a certain health service or product, unless the need itself is sufficient enough to warrant action and unless the services are perceived to be appropriate, adequate, available, accessible and affordable.

Likewise, people in the Mara Region would chose to obtain health services from different systems and practitioners depending on those perceived needs. Results from an exploratory question in this study about medical practitioners' first preference on where to obtain health services shows that apart from Modern Medicine (MM) (48.70%), the second largest group (19.69%) would prefer to obtain services from a combination of different medical practitioners from practitioners of all systems including Traditional Medicine (TM), Modern Medicine (MM) and Complementary and Alternative Medicine (CAM) as shown in Table 6.4 and Figure 6.1.

In the Mara Region, as elsewhere in Tanzania, most people have appreciated a variety of significant roles of Traditional Medicine (TM). Not surprisingly, in this study only 7.3% of the practitioners from the modern medical system tend to think that Traditional Medicine (TM) has no significant role whatsoever, while the rest (92.7%) believe the opposite to be true. One hundred percent of the traditional medical practitioners acknowledge the significance of Traditional Medicine (TM) as shown in Table 6.5.

Long before the trade contracts developed between Arabia in conjunction with India and the East African Coast in the Eighteenth Century, and even before the advent of Portuguese traders in the Seventeenth Century and the German missionaries arrived in the then-Tanganyika during the mid-1800s, indigenous people in Tanzania utilised Traditional Medicine (TM) for protection, cure, rehabilitation and health promotion of human health, their land and its resources.

Concurring with this historical fact, Mshingeni (1991) notes: *'Long before Buddha, long before the advent of Jesus Christ, long before Mohammed, Marco Polo, Christopher Columbus, Vasco da Gama and Captain Cook ... the aboriginal people in Africa, Asia, North America and Central Pacific Islands, used concoctions prepared from a wide range of medicinal plants for treating their sick'* (4)

Furthermore, the information on indigenous therapeutic materials, preparation processes, applications and types of illnesses were passed on from fathers to sons and mothers to daughters. This has been done by word of mouth and by practical fieldwork. Apart from other numerous uses of plants such as for food, food additives, flavours, timber, aromatic, cosmetic and other industrial purposes, the traditional Tanzanian societies, like most non-Western countries, have used medicinal plants, be it alone or in concoctions with other plants, animal or mineral products, in powder, tincture, ashes, soot, fumes, conserves, syrups, charms or raw forms for different purposes which are beneficial to the community and to individual members in different ways.

Table 6.5 The Perceptions of Medical Practitioners on the Role of Traditional Medicine

		No Significant Role				Total	
		No	%	Yes	%	N	%
Organisation Type	Participants of MM Services	102	92.7	8	7.3	110	100.0
Based on Services	Participants of TM Services	83	100	0	0	83	100.0
Total Participants		185	95.9	8	4.1	193	100.0

Source: Fieldwork (2006)

The Muhimbili Institute of Traditional Medicine estimates over 80,000 traditional practitioners are in Tanzania with various specialties, the majority of whom are herbalists. It also states that Tanzania has over 12,000 higher plant species, a quarter of which have medicinal properties. The Institute has documented over 2500 species, some of which are still under pharmacological analysis (5). Some of the proven medicinal plants are highly marketable worldwide including,

Cinchona ledgeriana, *Artemisia afra*, *Rauvolfia caffra*, *Rauvolfia serpentina*, *Atropa belladonna*, *Catharanthus rosea*, *Pischiera fuchsiaefolia*, *Moringa oleifera*, *Vuacanga Africana*, *Prunus Africana*, and *Waltheria indica*.

It is therefore commonly accepted that Traditional Medicine (TM), mainly the Bantu system of medicine in the Mara Region, as in the entire country of Tanzania, is a result of the long standing work and life of indigenous people towards managing their environment and health statuses. There is no exact count of traditional medical practitioners in Mara Region or Tanzania as a whole. However, in the 1990s estimates show that Tanzania had almost 60,000 traditional healers, compared to 600 modern trained doctors (Weenen *et al.* 1990). In pre-colonial Tanzania, Traditional Medicine (TM) practitioners were highly respected and famous advisors to tribal chiefs on illnesses, environments, socialization and behaviours. They were allowed to practice their knowledge and skills freely.

The arrival of Arab traders and Islamic religion starting in the coastal region of East Africa brought Arabic (Islamic) medicine which has been influenced by Graeco-Arabic medicine (Unani) reflecting partial syncretism between prophetic medicine and the Galenic medicine of Greece. The philosophy behind this medical system stresses illness prevention by urging people to consume healthy diets, live in hygienic conditions and have a virtuous livelihood requiring an observance of strict moral codes. Similar to the Judeo-Christians, Muslims believed Allah provided a healing to every illness since the early Islamic and Umayyad period (661-750 AD). They later developed and utilised Islamic medicine based on scientific analysis in the 9th century (Shanks & Al-Kalai 1984). In Islamic medicine, prophetic doctrines constitute the basis for interpreting illnesses, assimilated with local beliefs and conceptions. Islamic medicine had a developed an institute for training professional medical practitioners, unlike the existing African medical system (Swantz 1990; Feierman & Janzen 1992).

Both the German and British colonialists suppressed the work and role of Traditional Medicine (TM) practitioners. Section 37 of the 1968 Tanganyika Medical and Dental Ordinance restricted Traditional Medicine (TM) practitioners to work only in the communities in which they belonged. Later, Christian religious teachings were distributed against Traditional Medicine (TM) and its practitioners as a whole.

In the post-independent Tanzania, Traditional Medicine (TM) was again recognized by the Ministry of Culture until 1989 when it was placed under the Ministry of Health. In 2002, a specific separate act was enacted to govern Traditional Medicine (TM) and Complementary and Alternative Medicine (CAM) practices and products.

The recent Tanzanian case study by Stangeland, Dhillon & Reksten (2008) to trace developments in Traditional Medicine (TM) and the legislation concerning conservation and use of biodiversity reveals that since the last decade the Tanzanian government sought to recognise and legislate indigenous knowledge and resource bases abundant in Traditional Medicine (TM) and biodiversity. The research substantiates that Traditional Medicine (TM) is the most common form of health care available and utilised by all demographics in Tanzania. Further, the WHO endorsement on the integration of Traditional Medicine (TM), Complementary and Alternative Medicine (CAM) worldwide and the HIV pandemic has underscored the need to work with both Traditional Medicine (TM) and Modern Medicine (MM). Despite reservations from some practitioners mainly from the Modern Medicine (MM) system, the majority (87.0% of N=193) of medical practitioners (traditional and modern combined) perceive that Traditional Medicine has some positive contribution (major and minor) to human health. This has brought about the renaissance of Traditional Medicine to be recognised, be incorporated in the mainstream health care system, have a formal establishment of practitioners and recognise the urgent need for the sustainable use of biodiversity.

Although the study notes some challenges with regard to integration, it also concludes in addition to the significant contribution of Traditional Medicine (TM) to health care, it also provides income opportunities.

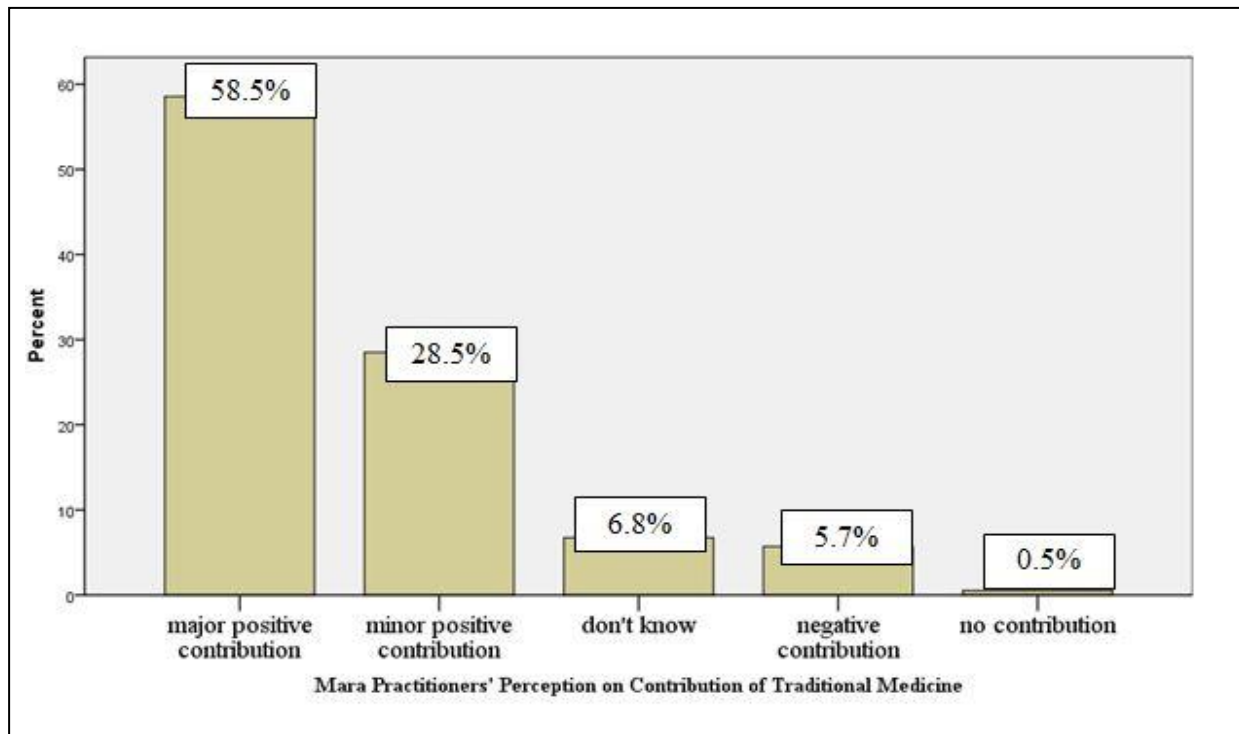


Figure 6.2 The Perception of Medical Practitioners on the Contribution of Traditional Medicine

Source: Fieldwork Survey (2006)

6.2.2 Traditional Medicine (TM) in the Mara Region

Over the past few decades, there has been an escalating rediscovery of the important role of Traditional Medicine (TM) in the provision of integrated health care in communities, particularly in developing countries where modern medical practitioners and their material resources are inadequate, resulting in an unequal distribution of quality health services over the country. Societies have therefore come to rely also on locally available and less costly forms of indigenous medical knowledge and practice.

Traditional Medicine (TM) practitioners in the Mara Region are consulted on a wide range of services by use of *material medica* from herbs, animals and marine products. The method of medicating and of health practices can be one or a combination of the following:

- incision and rubbing medicine (*kuchanja na kupaka dawa*)
- medicinal bathing (*kuogea dawa*)
- medicinal sprinkling (*kunyunyiziwa dawa*)
- sweating bath (*kufukiza kwa mvuke*)
- medicinal inhalation (*kuvuta harufu / moshi*)
- medicinal spittle (*kutemewa dawa*)
- massage (*kuchua*)

- local application of medicines (*kupaa dawa*)
- wound dressing (*kuweka dawa kwenye vidonda*)
- oral (*kunywa, kutafuna, kumeza*)
- eye and ear drops (*kudondoshea dawa jichoni au sikioni*)
- mouth wash and gurgle (*kuosha kinywa na kusukutua*)
- wearing charms, amulets (*kuvaa hirizi*)
- wearing beads (*kuvaa shanga*)
- prayers (*maombi*)
- exorcise (*kupungiwa mashetani / majini*)
- ritual sacrifices (*kufanya matambiko*)
- bone setting (*kuunga mifupa*)
- hot iron burning (*kukandwa na kitu cha moto*)
- incision of abscess (*kupasua jipu*)
- uvulectomy (*kukata kilimi*)
- circumcise (*kutahiri*)
- assist pregnant women in safe delivery (*kuzalisha wajawazito*)

For diagnostic or prediction purpose, traditional healers also use different techniques and mediums in the way in which augurs and soothsayers have been discussed, such as using *jinn*; drawing lines, applying arithmetic, reading palms, horoscopy, gazing at crystal ball, gazing mirror and water, rattling bones, rattling gourds, throwing seeds, throwing sticks and moving stones on a wooden board, and reading the entrails of a chicken in divining the future. The practitioner's expertise is observed in the way in which he or she interprets different probable happenings in the medium used in relation to the health problem and future status of the client. In creating a conducive environment for appropriate prediction, healing, rehabilitation and protective activities, practitioners may burn incense, sing and dance, and use different colours around mainly black or red in order to symbolize the gravity of the health problems to humanity as well as the white to the unblemished chair of the healers. Despite the differences in personal methods, most traditional healers believe that the ultimate power of healing is dependent on the goodwill of their ancestors or the Supreme Being in their society.

Traditional Birth Attendants (TBAs), together with village health workers, perform different activities in the villages to assist in safe reproductive health. Such activities include family planning services, infertility management, antenatal examinations, delivery, management of health problems associated with pregnancy, management of neonatal health problems, and management of puerperal problems. Few Traditional Birth Attendants (TBAs), have also been involved in the now-banned female genital mutilation, which was previously accepted by some ethno-cultural groups in the Mara Region, including the female circumcision in Tarime, Serengeti and part of Musoma's rural district.

Male circumcision is one of the world's oldest known surgical procedures. It is the removal of all or part of the foreskin of the penis. Worldwide, circumcision is practiced for religious, cultural, social and medical reasons. The Mara Region, as in other parts of Tanzania and Africa, has male circumcisers as the traditional medical practitioners who perform the traditional minor surgery. Circumcision is believed to enhance penile hygiene, to reduce sexually transmitted infection including HIV (Kilima *et al.* 2012), as well as to enhance sexual pleasure (Myers *et al.* 1985). Male circumcision is almost universal in many African countries. While the prevalence rate of male circumcision is about 15% in Burundi and Rwanda, it is about 70-80% in Tanzania and Kenya (WHO/UNAID 2007).

In the sub-Saharan region, studies indicate that countries with only few or no circumcision practices have the highest HIV prevalence compared to those which subscribe to circumcision traditions (Moses *et al.* 1994; Halperin & Bailey 1999; Auvert *et al.* 2005; Westercamp & Bailey 2007, Gray *et al.* 2007)

In Tanzania, the observance of male circumcision varies across tribal cultures. Urbanisation, the spread of Islamic religion and globalisation have caused an increase of non- circumcising ethnic groups such as the Luo in the Mara Region to join the customary circumcising ones, such as Kurya, Jita, Ruri, Kwaya, Zanaki, Ikizu, and Ngoreme, as noted by Urassa *et al.* (1997).

From a socio-cultural point of view, male circumcision is seen as the climax of the whole process of the initiation ceremony as a passage of rite from boyhood to manhood. In the Mara Region, some ethno-cultural groups, such as the Kurya celebrate this initiation ceremony known as *saro* broadly by involving the entire village. It is accompanied by dancing, singing and having special meals of the day and fundamental teachings (*e.g.* good civility, bravery, gender relations, the role of a man in the family and society, security). When the *saro* is done with one unsterilized surgical knife to a row of paraded mass number of young men in their reproductive age, there is a high risk of HIV infection spread in the village and the society as a whole.

Other risks of unsafe traditional circumcision include severe bleeding and septic wounds to some of the young men. Provision of some necessary medical supplies such as sterilized gauzes, surgical blades, clean cotton, analgesics etc., clear guidelines and collaboration with modern medical practitioners, especially on the surgical operation itself, is much needed in the Mara Region, and has also been recommended by a team of counsellors of the Nyerere Designated District Hospital, supported by the Kuryan elders and the two traditional circumcisers (*ngariba*) who perform the *saro* among the Wakira of Mugumu within the framework of the Community Based Health Promotion Programme (CBHPP) and *Jadi na Utamaduni katika Afya* (JUA) Project in 2004.

Common Roles of Traditional Medicines Table 6.6 shows some common roles of traditional medicines as identified by both traditional and modern medical practitioners in the research area. It shows that the top most five selected roles of Traditional Medicine (TM) include: cure of disease, poisoning, disease prevention, human protection against evil acts, disease diagnosis. The other category of ‘additional roles’ of Traditional Medicine (TM) includes: locating natural resources such as in mining and fishing (*Jita: obhudubhi bhwa jiswi*) and stopping alcoholism and drug addictions. Customarily, it are these roles which determine the speciality and therefore the title of a specific traditional medical practitioner.

Table 6.7 illustrates some collected common customary roles of Traditional Medicine (TM) in Tanzania. A close analysis shows that these roles were highly communally acceptable as they aimed at promoting human good health and societal welfare in search of harmony with fellow community members, the physical world as well as the spiritual world. On the contrary, in contemporary Tanzania, it is observed that the same roles and more other recently added ones are focusing more on individualistic motives and development

Table 6.6 Perceived Roles of Traditional Medicines by Medical Practitioners in Mara Region

Traditional Medicine's (TM) Role	Responses	
	N	%
Cure diseases	172	89.1
Poisoning	133	68.9
Prevention of diseases	131	67.9
Human protection against evil acts	104	53.9
Diagnosis of diseases	102	52.8
Identifying witches	98	50.8
Human rehabilitation	95	49.2
Property protection	92	47.7
Business flourishing	91	47.2
Love stimulant and affection enhancer	89	46.1
Witch fixing	89	46.1
Perpetuating conflicts and disharmony	89	46.1
Restoration of peace	87	45.1
Intelligence booster	86	44.6
Good competitive environment in games and or sports	83	43.0
Job acquisition and or promotion	82	42.5
Fortune casting	80	41.5
Caution signalling	73	37.8
Other (additional) roles	17	8.8

Source: Fieldwork Survey (2006)

On the contrary, in contemporary Tanzania, it is observed that the same roles and more other recently added ones are focusing more on individualistic motives and development. Based on the experience of the researcher and a literature review of authors in the field of social and cultural anthropology, Table 6.8 presents the recently emerged roles of medicinal plants and some possible explanation for their emergence and or popularity.

Although some people have also been identified as 'witches' in traditional societies by the use of the *community identifying deviant role*, witching other individuals has been never considered a role. Instead, it has been considered up until today as unacceptable use of medicine. Cases of human poisoning are more reported nowadays by the use of manufactured chemical products than by herbs in 'commercialised' feeding, in increased criminality and due to vulnerability to incalculable external causes of stress to humans in the contemporary societies.

Apart from considering medicinal plants as a business commodity, less research has been carried out on other recent emerging roles presented in Table 6.8 The practices are known to be for individual or for small groups in confidentiality, and therefore performed in high secrecy. Debates exist concerning their efficacy versus other factors such as conditions, ability and behaviours of the parties involved.

Table 6.7 Examples of the Common Customary Roles and Examples of TM in Tanzania

No.	Role*	Examples
1	Alarming (<i>kuchezwa chale</i>) and human-protection (<i>zindiko la mtu</i>)	From ill incidences, ‘bad eyes’ and protection of (weak) children from evil spirits (<i>ukago</i>)
2	Confidence building	Chewing some leaves before public performances/ duties
3	Cleansing / Purification	Sprinkling medicinal liquids to the spiritually unclean surroundings; throwing a leaf on a dead cat/dog lying on the road casting the spirits of deaths
4	Curative	From cold, diarrhoea, headaches, wounds etc.
5	Detective (<i>Community Identifying Deviants</i>)	Identifying the witches in the village in a divinatory ritual; identifying the thief in a debatable mysterious incidence
6	Growth	Rubbing the feet of a baby with herbs to assist it in walking
7	Preventive and Maintenance	Chewing sticks to prevent tooth decay and bad breath; preventing further bleeding after circumcision; dropping viscid milk-like sap from <i>Euphorbia Tirucalli</i> on the cut-off umbilical cord of a newly born baby by use of a bamboo knife to prevent entrance of ‘bad air’.
8	Property protection (<i>zindiko la mali</i>)	‘Medicalised’ farms and cows against thieves; protective inauguration of new residence.
9	Restoration (<i>zinduo</i>)	Restoring the woman’s fertility (‘closed wombs’); a person set free from a spell and disenchant.

*Note one type of medicine can have more than one role and vice versa. Italicized names in brackets are some of the generic descriptions given in the contemporary Swahili language or other Tanzanian vernacular.

Source: Fieldwork Survey (2006)

During the appraisal workshop for the work of traditional healers, traditional birth attendants, circumcisers and village health workers in April 2006 under the *Jadi na Utamaduni katika Afya* (JUA) Project and Community Based Health Promotion Programme, known as *Jamii Imara*, the following challenges were summarised as the urgent challenges faced in the region which hinder the delivery of quality health services: (6)

- inadequate knowledge on disease control and management, including surgery practices;
- insufficient and poor working tools and equipment;
- poor working environment, such as space and structures;
- poor communication for those living in remote areas;
- minimal involvement in district health management team deliberations;
- not connected to the health information system in the region to document work;
- village health workers’ lack of motivation and low morale because of not being paid salary wages, and because services were not well-recognised by some village authorities.

The way in which Traditional Medicine (TM) is utilised and managed today can be traced through an objective audit on its role, its traditional health care practices, the emergency of commercial collection of herbs, the human interaction with natural environments and the application of indigenous knowledge in the society. In the next Paragraph, qualitative results from participant’s point of view and response from medical practitioners during workshops enable an outline of some pertinent challenges which Tanzania is facing today concerning Traditional Medicine (TM).

Table 6.8 Examples of the Recently Emerged Roles of Traditional Medicine in Tanzania

#	Role	Examples	Suggested Reason for the Recent Increased Prominence
10	Business commodity	Collecting herbs to sell at market places as an income-generating activity; exporting a large quantity of <i>Jateoriza palmata</i> roots abroad.	Dwindling of agricultural sector; increased unemployment; growth of small-scale enterprises as a survival strategy; increased demand of medicinal plants by pharmaceutical industries in industrialized countries.
11	Career development	In helping a candidate in political election or in promotion prospects.	Escalating moral degradation where corruption has overshadowed leadership code of conduct.
12	Love stabilizers and initiators	To bar a husband from visiting his parents/friends frequently (<i>limbwete</i>)	Increased urbanisation and the breaking of community social security; redefining 'love' into a corner of only individual space; increasing awakening of marriage ties
13	Good/bad fortune enhancement	Attracting clients in business; to repel visitors from a certain household (<i>gundu</i>)	The fall of traditional communalism and the booming of capitalistic economic lifestyle and 'survival of the fittest', where people think one becomes poor because others are rich and vice versa
14	Sports and competition favouring	To create a 'game situation' which favours one side, such as opponents missing clear goal opportunities (<i>juju</i>). Also the power of team sorcerer to manipulate and alter the natural environment by use of magical knowledge and ritual performance.	A shift from seeing sporting activities as part of leisure, socializing and ingredients of traditional festivals, to professions or careers and in global organised associations.
15	Harm	Poisoning and 'fixing people' (<i>Kaluga</i>)	Moral degradation; lack of harmony; stressed life; widening the gap between rich and poor; envy; malice

Source: Field work Survey (2006)

These challenges are like time bombs which need to be addressed, not by the 'ineffective implementation syndrome', as it has been diagnosed by the team of experts in the *Tanzania Development Vision 2025* (Tanzania 1998: 9). This concept refers to a situation in which ambitions and plans are just pronounced, but not accompanied by effective implementation, monitoring and evaluation mechanisms. The major challenges of the Twenty-First Century which are facing Traditional Medicine (TM) in Tanzania include the following:

Lack of an enabling environment towards Traditional Medicine (TM)

A handful of practitioners of the orthodox or allopathic medical system and other citizens demonstrate a blanket disbelief, have prejudices or apathetic attitudes towards what is now referred to as traditional or alternative medicine (Dominic 1995). Qualitative collections of views on definition, efficacy and use of Traditional Medicine (TM) to 40 randomly selected people in the hospital, market places, sporting activities and church in Mugumu and Musoma, August and September 2005, shows that 24 (60%) perceive that Traditional Medicine (TM) can be categorized with (unsubstantiated) generalized views such as:

- it is witchcraft, sorcery, occult involved and just blackmailing;
- it depicts irrationality, non-efficacy and just has placebo effects if any;
- it is only for uneducated few people in rural areas, or its practitioners are the last alternative with minimal impacts to the general health of a nation;
- it is not for Christian communities as it is demonic, unethical and only visited by non-committed Christians.

However, records and comparative studies have proved that these statements are not correct, if not modified. For example, Cunningham (1993) in his article on *African Medicinal Plants* based a literature review, research and personal correspondence in Zimbabwe, Swaziland, Zambia, Malawi, Mozambique and Cote d'Ivoire shows that about 70-80% of Africa's population relies on Traditional Medicine (TM). Further, the researcher's experience in a rural district hospital, reveals that in the busiest paediatric ward, Modern Medicine (MM) at times becomes the last result, as the mothers would start consulting traditional healers in the village before they decide to come to the hospital as the last result. Table 6.9 substantiates the abundance of traditional healers as compared to modern doctors in Africa.

Traditional Medicine (TM) refers to a health resource for the majority of the population. Bodeker (2005) indicates that in the developing countries: *'The ratio of traditional medical practitioners to population is substantially higher than of trained medical personnel, representing an irreplaceable health care infrastructure. However, most traditional systems are outside the formal sector or have marginal status within it'*.

In Tanzania the same is true, mainly due to the lack of a good enabling environment. Whilst the Government is applauded for having established a Desk responsible for Traditional Medicine (TM) at the Ministry of Health and Social Welfare (MoHSW), the same cannot be said in terms of material support and clear institutional linkage at the regional, district and village level. The health care system reform ought to move from rhetoric to practice in order to bridge the present gap between vision and realisation of plans which seek to incorporate traditional medical practitioners in the national medical system.

Table 6.9 Ratio of Traditional Healers (TH) and Medical Doctors (MD) to Total Population (TP) in selected African Countries

Country	TH : TP	MD : TP	Reference
Nigeria (Benin City)	1 : 110	1 : 16,400	Oyenye & Orubuloye (1983)
Ghana (Kwahu district)	1 : 224	1 : 20,625	Anyinam (1984)
Kenya	1 : 833	1 : 987	Good (1987)
(Urban-Mathare)	1 : 146 - 345	1 : 70,000	Family Health Institute (1987)
(Rural-Ilungu)			
Tanzania (National average)	1 : 400	1 : 23,454	Mhame (2000)
Swaziland	1 : 110	1 : 10,000	Green (1985)
South Africa (Venda area)	1 : 700-1,200	1 : 17,400*	Savage (1985); Arnold & Gulumian (1987)

* For 'homeland areas' only

Source: Oyenye & Orubuloye (1983); Anyinam (1984); Good (1987); Green (1985)

Savage (1985); Family Health Institute (1987); Mhame (2000); Arnold & Gulumian (1987).

It is not only rather precarious to despise any positive contribution made by traditional medical practitioners, but also treacherous to show indifference to the traditional medical system. It is indeed too deceitful today to create an artificial veil to withstand the present increase of the public awareness of the negative effects of some traditional health-related practices performed and sometimes legitimised under the concept of 'cultural relativism'. Some of such undisputed evidence includes female genital mutilation, mutilation of children's teeth, uvulectomy and other ill practices performed by opportunistic practitioners who are also found in the formal health care system.

Absence of a mechanism to promote integration between medical systems

As the result of the weak institutional support, no facilitation has been done to formulate and institutionalise a stable mechanism to promote the integration and synergistic collaboration between practitioners of Traditional Medicine (TM) and Modern Medicine (MM). Signposts at hospital entrances with inscriptions such as, '*No traditional medical practitioners are allowed inside the wards*' are inefficient efforts to curb so-called 'health malpractices'. At the same time, these signposts are examples of hypocritical attitude of Modern Medicine Practitioners of the double life of the hospital versus the community. It is analogous to the reduction of a hospital for its patients to nothing more than a police cell for protecting the culprit ('sick person') from mob justice ('unprofessional treatment') or an exclusive temple of saints not ready to be defiled by cosmology and pollutants of the (outside) society.

Weak protection of indigenous intellectual property rights and unsustainable harvesting

The resurgence of natural product-based research and increased bio-prospecting by pharmaceutical companies from the industrialized world creates a genuine fear to indigenous people of overexploitation of both their knowledge and their resources (*cf.* Wilson 1992; Myers 1989). Although the business may create some foreign income to the Government, there is still a weak protection of these traditional property rights, especially for the individual – often typically poor - with the special knowledge and the local community from which the resources are tapped. Furthermore, the prices or compensation paid for the Medicinal, Aromatic and Cosmetic (MAC) plants cannot cover the replacement of the resource management costs to ensure a sustainable harvesting. As indicated in Figure 5.6, the indigenous healers and vendors of traditional medicine in most developing countries have first-hand information as well as the 'know how' of many traditional medicines and different traditional practices of health care.

In the process of trying to share or to interact with these healers with valuable information on indigenous medical knowledge, several large pharmaceutical companies, mostly from developed countries, have developed most of their medicines on the basis of the knowledge and experience of the often poor traditional healers in developing countries, including Tanzania. Furthermore, in most cases, the modified or adapted scientific explanation and dosage is well packaged, and protected by patents of these companies, often leaving the primary owners of the indigenous knowledge without any compensation.

However, the agenda for the protection of traditional intellectual property rights are now presented to different forums such as the World Health Organization (WHO), the World Trade Organization (WTO) and many others with a view to address the issue of protection of indigenous knowledge in developing countries. Major challenges need to be addressed on this subject, including the following:

- identifying the appropriate mechanisms for the protection of indigenous knowledge and ensuring enforcement;
- the criteria and the base for identifying the real beneficiary and how the benefits should be equitably shared between the primary and the secondary owner of the developed product;
- how to amend the existing international laws, international conventions, such as the intellectual property standards established by the *Agreement on Trade-Related Aspects of Intellectual Property Rights*. National laws need to attend to the accommodation of properties of indigenous knowledge and practices regarding laws on crude materials, manual skills and spiritual talents, which, to a large extent, are neither novel nor sophisticated enough to qualify patentability and trade marking in the present scientific era;
- how to ensure care and protection of Tanzania's biodiversity from the increasing export of mass collection of natural resources, such as the unsustainable logging of tropical rain forests, which has already sent signals of endangering species on the African continent (*cf. Elujoba et al. 2005*).

Dwindling wild natural resources

For many years, Traditional Medicine (TM) supplies could be obtained relatively easily in Tanzania from specific species of Medicinal, Aromatic and Cosmetic (MAC) plants and animal products within the vicinity. A constant extraction without conservation measures of these resources has now caused most of them to be categorized as '*endangered rare species*'. This situation is the result of high degradation of the environment and habitat, the constant extraction without preservation measures of these resources with the increasing demand and use of natural land for agriculture and human settlement. According to the *Wildlife Trade Monitoring Network* (TRAFFIC), Eastern/Southern Africa news, over 100 key species of plants and 29 species of animals have become rare. An example of the most threatened type of vegetation in Tanzania is the coastal forest of Zanzibar in Lambane regional Mozaic.

Table 6.10 Tanzanian Export Earnings from Fauna and Flora for the Years 1997-1999

Item Exported	1997 (000)Kgs	1997 (000) TSHs	1998 (000) Kgs	1998 (000) TSHs	1999 (000) Kgs	1999 (000) TSHs
Plants and plants parts used in perfumery, pharmacy etc.	363.9	458,961.4	287.6	468,951.3	370.9	884,676.6
Natural gums, resins, gum resins, balsams	1,506.5	412,502.1	943.2	215,561.5	870	354,774.6
Garlic	1,007.4	64,896.7	1,071.2	119,178.5	537	68,132.6
Sea weeds, Algae	2,476.7	776,524	2,185.8	1,380,701.5	3,869.7	1,529,980.5
Sea fauna e.g. sea horse	1,047.2	2,858,123.1	1,283.2	3,470,017.3	1,357.6	4,004,748.0
Total	6401.70	4,571,007.3	5,771.0	5,654,410.1	7,005.2	6,844,311.3

Source: Mhane (2000) The National Institute for Medical Research Dar-es-Salaam

In view of the aim of reaching the sustainable use of Medicinal, Aromatic and Cosmetic (MAC) plants, the issue of their conservation needs also to be addressed. Both research and harvesting of medicinal plants must be done in a responsible way. Further, as Rukangira (2001) adds, *ex-situ* cultivation of certain species of Medicinal, Aromatic and Cosmetic (MAC) plants must be necessary in order to obtain raw materials which are grown under the same conditions of climate and ecology.

Lack of an indigenous information system and reliable data bank

Indigenous knowledge on medicinal plants and their preparations, together with the specific health problems for which they are used has typically been passed on in the community by the oral tradition, often in a secretive way from one healer to another, often his or her own sibling or partner). In order to rely on this kind of transfer of information and knowledge is problematic at times; when the tasks are generally handled over at the last minute such as before the death of the elder healer, rendering it difficult for the new healer to remember all knowledge and practice correctly. An extraordinarily good memory is often needed to achieve such memorisation (*cf.* Kokwaro 1976).

On the other hand, sudden deaths of healers may also deprive their community of an opportunity of handing the knowledge properly over to the next generation. Up to the present time, there are only a few well-documented information systems or systematic collections of local and botanical classification of Medicinal, Aromatic and Cosmetic (MAC) plants and their uses. Exceptions include the work of Greenway (1940), Sangai (1963) and Kokwaro (1979). Despite several studies of the *National Institute of Medical Research and of the Muhimbili Institute of Traditional Medicine*, there is still a lack of comprehensive and updated information of Medicinal, Aromatic and Cosmetic (MAC) plants in Tanzania. Further confusion of 'new discoveries' of medicines or 'miraculous healing practices' could paralyze a considerable group of the Tanzanian population in misplaced euphoria and cause other social welfare problems (7). One recent example refers to a massive, high-traffic migration of thousands of people to Samunge Village of Loliondo in pursuit of drinking a cup of boiled liquid of *Mugariga* (*Carissa spinarum*), formerly known as *Carissa edulis* from the *Apocynaceae* family. The medicinal plant solution, administered by the Rev. Ambilikile Mwasupile ('Babu'), was actually not a new discovery, and had been used not only in Tanzania but also in other countries including Kenya, Ethiopia, South Africa, Sudan, Botswana, Ghana, Nigeria, Namibia.

The solution had already long since been reported by researchers to have *anticonvulsant*, *antidiuretic*, *antidiabetic*, *hepatoprotective*, *antioxidant* and *analgesic* activities (*cf.* Chatterjee & Roy 1965; Kokwaro 1979; Ibrahim 1997; Lindsay *et al.* 2000; Ned *et al.* 2004; Yau *et al.* 2008). In order to ascertain claims of efficacy to cure diseases such as cancer, HIV/AIDS, diabetes, asthma and epilepsy, further research and clinical trials are needed.

Senzota (2012) presents a scientific account of an environmental assessment resulting from the sharp increase in visitors to Samunge Village in early 2011. Serious adverse impacts to the local environment include people trampling on plants and animals, unmanageable dumping of liquid and solid waste, haphazard sanitation and an overall change in the panorama by a long chain of various lights and heavy vehicles bringing sick people and their relatives from different parts of Tanzania and the neighbouring countries to the village. The present Health Management Information System of Tanzania (MTUHA) does not include data about patients, diseases and management from Traditional Medicine (TM) and their contribution to health care delivery. There is not a unified national or regional developed traditional disease classification system. As a result, lack of supporting data from this sector has undermined efforts to show its role in health and health-related matters to the public and the international agencies.



Figure 6.3 A Traditional Medicine (TM) Vendor in the Musoma Municipality
Source: Fieldwork (2007)

Although some information can be obtained about the available (registered) medicinal plants and related products from the Institute of Traditional Medicine's (ITM) *News Bulletin and Tanzania Health Research Bulletin* as well as from some significant networking through the *Natural Products Research for Eastern and Central Africa* (NAPRECA), there is no updated Ethnobotanical Knowledge System (EKS) and networking both abroad and in the country's discrete and non-coordinated data banks which are mainly situated at the national level. Apart from the acknowledgement of a few meetings, there exists a feeling among the leaders of traditional healers (CHAWATIATA) in the Mara Region of being left behind from important gatherings of stakeholders at the national level. As the Secretary of CHAWATIATA – Mara (Mr. Hassan) mentioned in 2010: '*often, we are not consulted or invited to different traditional medicine stakeholder meetings and workshops which take normally place in Dar-es-Salaam*'.

The need for education, research and development on Traditional Medicine (TM)

Any appropriate action by the civil society, government, non-governmental organisations, institutions and medical practitioners on the management and efficient utilisation of medicinal plants must be the result of public awareness on the factors affecting utilisation of medicinal plants. Decision-making and policy formulation need to be based on accurate, reliable, complete and relevant data. Data will be available through research and development in different areas, such as the identification of 'new' medicinal plants, rare priority species, biodiversity conservation, development of Ethnobotanical Knowledge Systems (EKS) and networking. In addition, there are traditional health care improvement, natural resource rights, and integration of medical systems in the country. Due to limited capacity, the relatively few national institutions and human resources in Tanzania need to be equipped or assisted to take care of any deficiencies. In other words, improvement of infrastructure and communication is an issue of great importance, especially on community capacity development and taking practical steps for re-orientation towards indigenous people, their knowledge, heritage and cosmology.

It is commendable that the *Institute of Traditional Medicine* (ITM) has a Journal, the *ITM News Bulletin*, which informs the public about various study opportunities, registered products of Traditional Medicine (TM) and about research carried out on Traditional Medicine (TM). However, more research and reports on Traditional Medicine (TM) are needed. The *Tanzanian Journal of Health Research*, a publication of the *Tanzania Health Research User's Trust Fund* of the *National Institute for Medical Research* (NIMR), has published only three articles related to Traditional Medicine in three years (2008-2010). Furthermore, online search within the site for the *East African Journal of Public Health* results in zero matches related to Traditional Medicine (TM) in the available issues from 2004-2008. This short review shows how minimally Tanzania and East Africa as a whole have engaged in scientific research on Traditional Medicine (TM) or local Medicinal, Aromatic and Cosmetic (MAC) plants. *Institute of Traditional Medicine* (ITM) started a postgraduate course for Master of Science Degree in Traditional Medicine Development., which began in the Academic Year 2009-2010. However, its target is limited to the few already learned practitioners instead of targeting the many informally trained traditional healers and past-secondary school apprentices of Traditional Medicine (TM). Furthermore, it is imperative to revisit the present curriculum of secondary schools and colleges of health and allied studies in order to incorporate such courses in traditional and alternative medicine, medical and social anthropology, ethno-botanical knowledge system, traditional medicine development etc.

The issue of safety of Traditional Medicine (TM) products

Uncontrolled and inappropriate use of traditional medicines and practices can have negative or even dangerous effects. For the purpose of regulating and controlling traditional and alternative medicines, the Tanzanian Parliament enacted Act No. 23 of 2002. Two provisions of this law in which enforcement agencies are mentioned, include the Registrar and the Council of Traditional Medicine (TM) and Complementary and Alternative Medicine (CAM). Quality assurance of traditional and alternative medicine practitioners, services and methods are to be achieved as a result of this Act. However, less has been done so far to design the mechanism of how to ensure quality. The World Health Organization Fact Sheet No. 134 (WHO 2000a) shows that due to counterfeits and adulterated herbal products in international markets, there exist also hazardous patient safety threats (8). The same can be observed in the Mara Region, where the people are led to incorrectly believe that Traditional Medicine (TM) in market places and at the practitioners' own clinics are natural, and do not carry any risk for their health.

Traditional medicines can also be harmful when they are prepared under poor conditions. Also, when they are taken inappropriately and sometimes together with other contra-indicated medicines from Modern Medicine or Complementary and Alternative Medicine. Furthermore, it can be difficult to assess the efficacy and quality of herbal and other natural products because some of the finished products are a mixture of several elements of which the individual safety and efficacy have not been documented. As is the case in Modern Medicine, safety is directly related to the way in which the elements are handled to achieve the final product.

The problem of contraindicated medicines from different medical systems also reinforces the need for interprofessional collaboration of providers in order to help their clients to take well-informed decisions in the appropriate use of medicines and other therapeutic practices. As Table 5.23 indicates, the respondents of the surveys report on the safety of Traditional Medicine (TM), that 58 (30%) of all practitioners feel that its safety is questionable, while 37 (19.2%) express their opinion that its safety level is poor. However, most respondents, 88 (45.6%) report that the safety level is good.

Table 6.11 The View of Medical Practitioners on the Safety of Traditional Medicine (TM) Services

Response	N	%
Don't know	10	5.2
Poor	37	19.2
Questionable	58	30.0
Good	88	45.6
Total	193	100.0

Source: Fieldwork Survey (2006)

Contextualization of the world's religions on teachings about Traditional Medicine (TM)

Communicating the faith and doctrines of dominant religions, especially Christianity and Islam, since the time of the early missionaries and Muslim traders has brought along cultural characteristics of the mother churches or mosques, while declaring most of the indigenous knowledge, values and cultural practices as 'animalistic'.

Not all such actions can be backed by Biblical or Quran absolutes. The challenge is today, to contextualise African Christianity and African Islam without losing its basic virtues, because faith and religious orders are still part of the life of many Africans. Additionally, religious institutions are powerful agents for social change in many societies. The contextualisation of world religions ought to help the believers also to change their negative attitude towards Traditional Medicine (TM).

Moral degradation and the breakdown of social structures

The emergence of urbanisation, 'modernity', a free market economy and globalisation with increased global communication networks as part of the socio-cultural and political changes have awakened the structure of the community which used to keep the social structures and values intact. Although people in Tanzania still have a strong sense of nationalism, activities and responsibilities of daily life are in general mainly taken on an individual or a family basis.

Encouraged individual competitions, problems of unemployment and an increased gap between the poor and the rich, along with other social factors have resulted in certain moral degradation, misuse of natural resources and the emergence of opportunistic, unethical medical practitioners, often operating just for current business profit and not necessarily for sustainable management and utilisation of natural resources, including Medicinal, Aromatic and Cosmetic (MAC) plants.

Shocking manifestations of poverty in the society

A large amount of government revenue is spent on repayment of public debt, leaving investment in social services such as health often to donor-funded projects, foreign aid and the private sector. Still, during the financial year 2011-2012, the Tanzanian national budget was heavily supported by outside borrowings and grants, comprising about 50% of the total budget. It is clear that a reciprocal relationship exists between poverty and ill health, rendering the implementation of the *National Poverty Eradication Strategy* (NPES) and the monitoring of both welfare and poverty indicators is the primary duty of every sector and of all stakeholders.

The United Nations system and the international financial institutions also have to play a supportive role in the mobilisation of energy of all development in order to achieve a continuous alleviation of poverty in developing countries.

6.2.3 Modern Medicine (MM) in the Mara Region

In colonial, and later in independent Tanganyika, later called Tanzania, there has been an emphasis on and spread of Modern Medicine (MM), and at the same time a decrease of Traditional Medicine (TM)), largely initiated by the early missionaries in the Mara Region. They include missionaries from the Eastern Mennonite Missions in Pennsylvania, U.S.A, who started their mobile clinics at Shirati in 1934. With the help of Chief Nyatega and the community, these missionaries from the Mennonite Church in Tanganyika (Tanzania), now known as the *Kanisa la Mennonite Tanzania* (KMT), were able to build the Shirati *Kanisa la Mennonite Tanzania* (KMT) hospital in 1953, which is now considered to be a designated hospital for the Rorya District Council. In 1960, they established the attached *Nursing Training School*. Prominent modern hospitals in the region established earlier by private and religious supported bodies include the Kibara Hospital, situated on the Mwibara Peninsula in Bunda and founded in 1962 by the *Sisters of the Society of Jesus Mary Joseph*; the Nyerere Designated District Hospital of the Serengeti District Council, established in Mugumu in 1980. Later, the Kisare Nursing School under the *Kanisa la Mennonite Tanzania* (KMT) was attached, while the Bunda Designated District Hospital of the Bunda District Council was established in 1992 by the then-Mbulu Synod of the Evangelical Lutheran Church, known as *Kanisa la Kiinjili la Kilutheri Tanzania* (KKKT).

Other health facilities by private and religious organisations include the Roman Catholic of Tanzania Hospital in Kowaki; the *Tarime Goodwill Foundation* (TGF) Hospital in Tarime; the *Rural Aid Organisation* (RAO) Hospital and the Safina Orphanage in Shirati; the Catholic Church of Tanzania Dispensaries at Makoko, Baraki, Komuge, Gamasara, Rosana, Kisangura, Rogoro and Nyarombo; the Catholic Church of Tanzania Care Homes and Communities of *Tupendande* at Musoma, *Tangacha* at Tarime and the *Mji wa Huruma* at Kigera (Musoma Rural); the AIDS ABC of the Tanzania Anglican Church; the Seventh Day Adventist Church dispensary at Kamunyonge, Buseg; the Anglican Church of Tanzania (*Kanisa la Anglikana Tanzania*), a community-based rehabilitation for disabled, Home Based Care, Mobile Clinics and the *Voluntary Counselling and Tests Centres* (VCTC), located in all districts of the Mara Region; the *Kanisa la Mennonite Tanzania* (KMT) Health Centre/Dispensary at Mugango, Kisaka, Nyabange, Bumangi, Nyamasanda, Nyangoto, Nyarero, Burere, Kitaramanka; the *Shirati Health, Education and Development Foundation* (SHED) the Health Centre at Sota; the Bethsaida Centre for Health and Development, the Health Centre at Kwangwa; the Coptic Church Health Centre at Nyasho; the *Christian Association for Development and Aid* (CADA) Dispensary in Musoma, Mugumu, Nyangoto, Nyangabo, Nayansicha; the African Inland Church Dispensary at Bweri;

the *Kanisa la Mennonite Tanzania* (KMT)- Jamii Imara Centre for Community Based Health and the *Voluntary Counselling and Tests Centres* (VCTC) and the *Serengeti Disabled Development Association* (SEDIDEA) for physiotherapy and rehabilitation health services.

Health facilities offer diverse preventive, curative, rehabilitative and counselling services, while community-based homes and orphanages provide help to people living in hardship, offering legal advice, shelter, food, aid for schooling, health insurance, other social needs and promotion of healthy behaviours. More modern medical health workers in the Mara Region from the government and from faith-based organisations such as the Roman Catholic Church, the Anglican Church, the African Inland Church, the Seventh Day Adventist Church, the Evangelical Lutheran Church, the *National Muslim Council of Tanzania* (BAKWATA), the Salvation Army and other private dispensaries, health clinics and hospitals have continued to offer different health services to people for maintenance or improvement of their health status.

The emphasis and full support of Modern Medicine (MM) by the Government as well as the perceived good results, which meet the peoples' expectations, especially in curing major communicable diseases such as malaria, measles, cholera, tuberculosis, etc. may have changed the preference of patients of the health services towards Modern Medicine (MM), more than other medical systems. The majority of people (94 = 48.7%) in the study sample, as shown in Table 6.4 and Figure 6.1, consult modern medical practitioners starting with the dispensary, health centres, and district hospitals. This includes the highest level hospitals, where people are referred to for serious and for specialized health problems, and also to referral zoned hospitals situated in Mwanza, Kilimanjaro, Dar es Salaam, Dodoma or Mbeya. Payment of health services in Modern Medicine (MM) is either mainly on cash basis or prepaid through the national health insurance and community health insurance. Ironically, despite all the emphasis and support on Modern Medicine (MM), there are still quite a number of people in every community who consult traditional and spiritual healers and utilise various traditional medicaments as well as alternative medicines.

Both traditional and modern medical practitioners believe that Modern Medicine (MM) has a major positive contribution to the maintenance of human health in the society. On the question about their perceptions of the level of the contribution of Modern Medicine's (MM) to human health, out of 193 medical practitioners in the Mara Region, 156 (80.8%) report a major contribution, while 3 (1.6%) report to perceive negative contribution and only 1(0.5%) report their perception of no contribution of Modern Medicine (MM), as shown in Figure 6.4. Such data reveal that almost all 187 (96.9%) practitioners (both traditional and modern) believe that Modern Medicine (MM) either has a major positive contribution or a minor positive contribution to human health. The question therefore remains whether the health services offered by Modern Medicine (MM) in the Mara Region are accessible and of high quality. It is necessary to obtain relevant information on the supply and quality of the health services for health planning, management, monitoring and evaluation. Efforts to increase appropriate reproductive health, maternal and child health, interventions for HIV/AIDS, malaria, and other major diseases in Tanzania require an appropriate assessment of how medical systems respond to increased inputs, improved processes over time as well as to the impact of such inputs and processes and their impact on improved health outcomes. In this Paragraph, the study presents some key health indicators in line with the *Service Availability and Readiness Assessment* (SARA) indicators of the World Health Organization (2012c) (9).

The *Mara Region Health Report* (2011) shows that the region has a total of eight hospitals, 28 health centres and 223 dispensaries with different ownership in district councils, as shown in Table 6.8. Based on the government policy guidelines, each ward is supposed to have at least one health centre where outpatients and a few inpatients can obtain services.

Much credit is given to religious organisations, which includes the *Christian Social Services Commission* (CSSC), which understand and accept the Tanzanian government's call to complement its efforts in developing, running or supporting health facilities in the country as it is noted that while there are only three hospitals owned by the government, religious organisations own five facilities in the Mara Region.

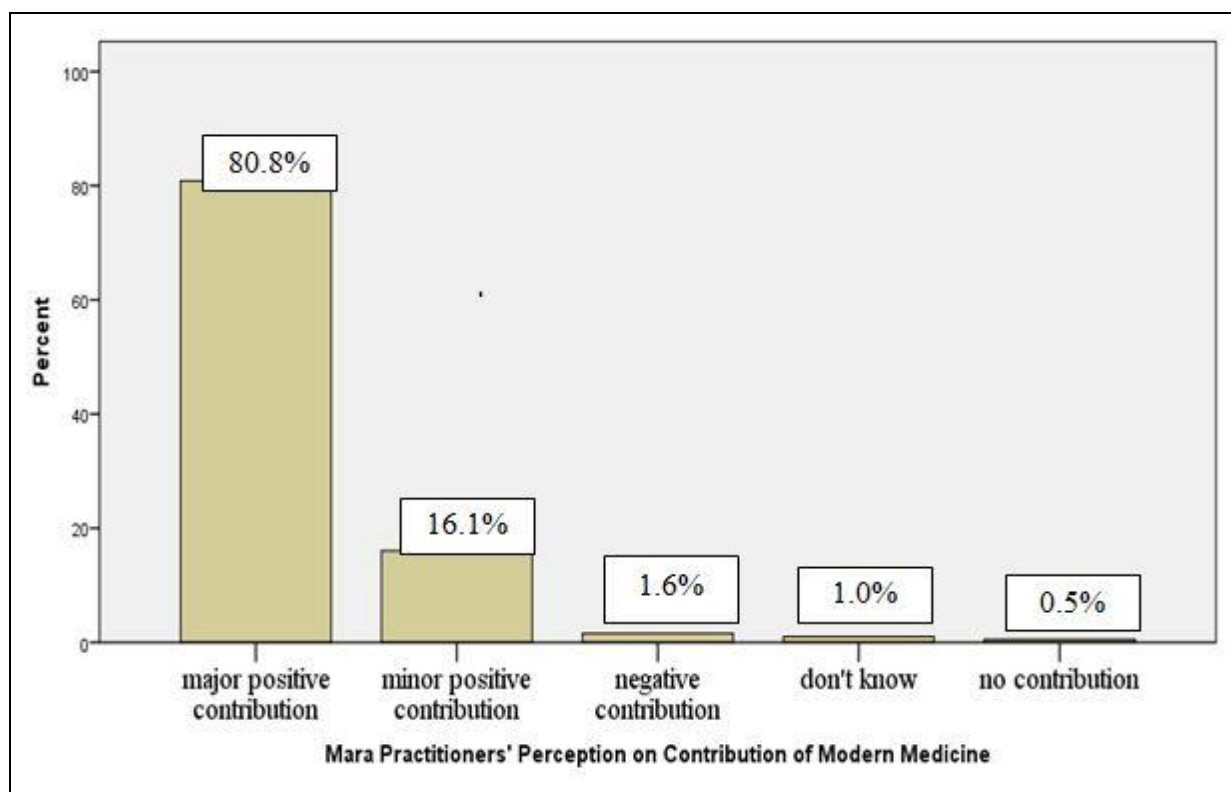


Figure 6.4 Practitioners' Perception on the Contribution of Modern Medicine (MM)
Source: Fieldwork Survey (2006).

The data of 2011 show 28 Health Centres only, with a total 154 Wards in the Mara Region. Accessibility of the health services in the Mara Region is therefore diminutive, as is true of quality of the health services due to the inadequate health facilities, the lack of sufficient health workers, the interrupted flow of drugs, the insufficiency in medical supply and working medical equipment as presented in Tables 6.8 through 6.13.

In the Mara Region, there is a notable deficiency of qualified modern health workers in the different health facilities as shown in Table 6.13. The overall available number of workers in the entire Mara Region is only 2394 or two-thirds (66%), indicating a shortfall of about 1228 or one-third (34%). Nevertheless, the deficiency is not uniform across the councils. Musoma rural district council has the highest deficiency with 368 (54%), followed by Rorya with 233 (44%), Serengeti with 217 (37%), Tarime with 86 (21%), Musoma municipality with 72 (26%) and Bunda with 190 (25%).

The overall data in Table 6.13 also show that while the private sector has a shortfall of employees amounting to about 391 (58%), the government shortfall is even more, reaching 887 (69%).

Table 6.12 Health Facilities in the District Councils of the Mara Region

		District Council						Total
		Musoma	Musoma Rural	Bunda	Serengeti	Tarime	Rorya	
Hospital	Gov't	1	1	0	0	1	0	3
	Religious	0	0	2	1	0	2	5
	Private	0	0	0	0	0	0	0
Health Center	Gov't	2	2	3	2	5	3	17
	Religious	1	0	0	0	2	4	7
	Private	1	0	0	0	2	1	4
Dispensary	Gov't	11	50	34	43	12	21	171
	Religious	4	10	3	2	5	6	30
	Private	8	0	3	4	5	2	22
Total		28	63	45	52	32	39	259

Source: Mara Regional Health Report (2011)

With such results, to support integration of traditional and modern medical practitioners is not only to complement what is done by modern health workers but also to fill the gaps, including some failures of Modern Medicine (MM) to comply with the patients' expectations, the inability to manage some illnesses and health problems, the sky-rocketing costs of modern medical services, and a failure to link up well with the socio-cultural values of different clients as is noted in Chapter I.

Table 6.13 Human Resource Establishment Status in the District Council Health Care System of the Mara Region

District/ Hospital	Government Employees		Private System Employees		Total		Total % available	Total % shortfalls
	Need	Have	Need	Have	Need	Have		
Musoma Municipality	187	153	85	47	272	200	74	26
Musoma Rural	510	290	168	20	678	310	46	54
Bunda	435	310	315	250	750	560	75	25
Serengeti	560	360	29	12	589	372	63	37
Tarime	332	282	84	48	416	330	79	21
Rorya	285	139	245	158	530	297	56	44
Regional Hospital	387	325	0	0	387	325	84	16
Regional Total	2,696	1,859	926	535	3,622	2,394	66	34

Source: Mara Regional Health Report (2011)

A low workforce density of modern health care in the region triggers some other common problems, such as the inaccessibility of the health services for some specialised services, the high costs of health care, the long patients' waiting time and the lower quality of service delivery. Therefore, measures which seek to increase the size of the health workforce through increased recruitment, higher retention of existing staff and better geographical balance are strategies which are being explored by the Ministry of Health and Social Welfare (MoHSW) together with the Ministry of Labour and Employment (MoLE).

The World Health Organization (2006a) recommends 2.3 health workers per 1,000 people as a benchmark requirement of workforce density for the adequate coverage of essential health interventions and core *Millennium Development Goals* (MDG) for 2015, which are related to health services. According to their current projections of a total number of population and available workers, the ratio is one health worker for 69,702 people. There are 1,243 hospital beds in total in the entire Mara Region, making the availability of an average of one bed for 1,000 people in the region. The national average is one bed for 1,000 people. The number of beds per hospital in each council is as shown in Table 6.10.

Table 6.14 Available Beds per Hospital in the District Councils of the Mara Region

District Council	Hospital	Available number of Beds
Musoma Municipality	Regional Hospital	300
Musoma Rural	Butiama	75
Rorya	Shirati DDH	167
	Kowak	115
Tarime	Tarime	180
Bunda	Bunda DDH	200
	Kibara	80
Serengeti	Nyerere DDH	126
Total Hospital Beds in the Mara Region		1,243

Source: Mara Regional Health Report – 2011

In as much as the government and private organisations work hard to ensure sufficient availability of material resources, it has been noted that most health facilities also have a notable amount of unreliable transportation means (Table 6.15) and medical equipment (Table 6.16 & 6.17) which are not repaired. Long-term, defective assets may end up being completely non-functional, in which case high costs of new procurement may befall the health facility, if not the accumulated, unnecessary high storage cost.

Table 6.15 The Available Motor Vehicles and Motorcycles in the Health Sector of District Councils of the Mara Region

District Council	Motor vehicles		Motorcycles	
	Functional	Defective	Functional	Defective
Musoma Municipality	12	2	5	0
Musoma Rural	7	1	3	0
Rorya	10	3	1	2
Tarime	4	0	6	0
Bunda	7	1	12	3
Serengeti	8	0	6	0
Total	48	7	33	5

Source: Mara Regional Health Report (2011)

Among the overall list of defective equipment, X-ray machines 3 (33.3%), autoclaves 14 (21%) and laboratory microscopes 34 (18.8%) male the top the list, as indicated.

Table 6.16 Available Medical Equipment (i) in the District Councils of the Mara Region

District Council	Lab Microscope		X- Ray	
	Functional	Defective	Functional	Defective
Musoma Municipality	33	13	2	1
Musoma Rural	24	0	0	0
Rorya	17	3	1	0
Tarime	31	11	0	1
Bunda	22	0	3	0
Serengeti	20	7	1	1
Total	147	34	7	3

Source: Mara Regional Health Report (2011)

The Mara Regional Health Report (2011) shows that of all the district councils, Musoma rural is the least equipped in terms of equipment as well as human capital. It is a district council with neither an autoclave nor X-ray machine. It has the highest deficit of competent required workers 368 (54%), and further, has only 75(6%) of the total reported hospital beds available in the region.

Table 6.17 Available Medical Equipment (ii) in the District Councils of the Mara Region

District Council	Ultrasound Machine		Autoclave	
	Functional	Defective	Functional	Defective
Musoma Municipality	2	0	10	3
Musoma Rural	0	0	6	4
Rorya	1	0	4	4
Tarime	0	0	11	0
Bunda	2	0	15	2
Serengeti	2	1	4	1
Total	7	1	50	14

Source: Mara Regional Health Report (2011)

Under the International Health Regulation of the World Health Organization (WHO 1995), and the National health management information system established in 1999 well abbreviated in Swahili as (MTUHA), certain diseases and conditions are under surveillance, referred to as 'notifiable diseases'. Consequently, these are expected to be reported to the health office authorities right from the grassroots up to allow for the earliest warning of possible outbreaks and appropriate management.

Table 6.18 provides an overview of diseases, which were reported by the end of 2011. More attention and efforts are particularly needed for health promotion in order to prevent dysentery and animal bites.

Table 6.18 Annual Reported Notifiable Diseases in the District Councils of the Mara Region

		District Council						Total
		Musoma Municipality	Musoma Rural	Rorya	Tarime	Bunda	Serengeti	
Notifiable Diseases	Acute Flaccid Paralysis	3	0	4	4	0	4	15
	Cholera	0	0	0	0	0	0	0
	Dysentery	0	0	868	939	1045	629	3481
	R/Fever	0	0	0	0	0	0	0
	Measles	0	0	7	5	4	3	19
	Meningitis	0	0	0	0	6	0	0
	N/Tetanus	0	0	0	0	0	0	0
	Plague	0	0	0	0	0	0	0
	Animal Bite	14	40	190	284	248	581	1357
	Yellow Fever	0	0	0	0	0	0	0
	Rabies	0	0	1	3	0	4	8
Total		17	40	1070	1235	1303	1271	4865

Source: Mara Regional Health Report (2011)

Although data reporting is incomplete, it can still be maintained that the Musoma municipality takes in the highest number of clients who undergo surgical operations, both major and minor, and receive blood transfusions (*cf.* Table 6.19). It is because the regional hospital is located in the Musoma municipality. It is also better equipped in terms of operating theatre facilities, equipment, and medical doctors who are allowed to perform surgery in Tanzania.

Table 6.19 Yearly Surgery and Blood Transfusions in District Councils of the Mara Region

District Council	Major Operation	Minor Operation	Blood Transfusions
Musoma Municipality	597	4,344	4,360
Bunda	545	483	3,444
Serengeti	436	267	778
Musoma Rural *	0	1	1
Rorya *	1	8	2
Tarime **			

* Incomplete data ** Not reported

Source: Mara Regional Health Report (2011)

Due to different health problems, the Mara Region still has a high maternal death rate, which can be reduced by addressing the root problems. Table 6.16 discloses the top most underlying causes of maternal death, which include *anaemia* (16 cases), *puerperal sepsis* (14 cases), *postpartum haemorrhage* (7 cases), *malaria* (5 cases) and *eclampsia* (5 cases) in patients showing symptoms of pregnancy induces *hypertension* and *proteinuria*. Other causes are ruptured uterus, *septicaemia*, obstructed labour, pulmonary oedema and HIV/AIDS. Some of the recommended interventions by the World Health Organization (*cf.* Dabydeen 2009) to tackle the basic problems of maternal death especially in the developing world include,

among others, ensuring balanced nutrition and vital nutrients intake, family planning, provision of effective *antenatal* care, safe delivery and *intrapartum* care, *post-natal* care and responding to obstetric emergency services.

Table 6.20 Causes of Maternal Deaths in the District Council of the Mara Region

		District Council						Total
		Musoma Municipality	Musoma Rural	Rorya	Tarime	Bunda	Serengeti	
Causes of Maternal Deaths	Septicaemia	0	0	0	1	1	1	3
	Anaemia	2	2	4	2	3	3	16
	Malaria	0	2	0	0	2	1	5
	PPH	3	0	1	0	2	1	7
	Puerperal							
	Sepsis	9	3	1	0	0	1	14
	Obstructed Labor	0	1	0	0	1	0	2
	Pulmonary							
	Oedema	0	1	1	0	0	0	2
	Meningitis	0	0	0	0	0	0	0
	HIV/AIDS	2	0	0	0	0	0	2
	Eclampsia	1	0	0	0	3	1	5
	Pneumonia	0	0	0	0	0	0	0
	Ruptured Uterus	0	2	0	0	1	1	4
	Others	4	1	2	2	0	1	10
Total		21	12	9	5	13	10	70

Source: Mara Regional Health Report (2011)

6.3 Interprofessional Collaboration in Health Care

6.3.1 Traditional Beliefs on Causes of Illnesses and Remedies

Traditionally in the Mara Region, as in most regions of Tanzania, beliefs of health and illnesses are seen in a wider context of individual well-being in the social and spiritual environments (Juntunen 2001). Following Foster & Anderson (1978), causes of illnesses can be conceptualized as either *naturalistic* or *personalistic*. *Naturalistic* causes are closely related to natural activity of disease agents – bacteria, viruses and parasites - and to continue being healthy, keeping a proper balance of body fluids and energy of body and mind which must be maintained and protected. *Personalistic* causes are believed to emerge from the actions of other people, either supernatural beings such as deities or deceased ancestors or living human beings with special powers such as witchcraft. When a society member either violates a norm, a taboo or does not respect the elderly and deceased ancestors, illness may occur as a retaliation of a moral punishment. *Personalistic* illnesses are therefore understood as to be spiritual or magical (Mbiti 1994). Healing and rehabilitation from *personalistic* illnesses are possible through traditional healers and spiritualists who have to perform certain rituals and use symbolism with the patient concerned. In the case of lack of respect to the elderly and the ancestors, the healing process may include some sort of restitution to spell away the curse. As one of the traditional healers in Serengeti district reported during an interview:

'To restore someone who has been cursed, he or she has to offer a cow, goat or a sheep without blemish for slaughter sometimes accompanied with grain flour'.

Furthermore, in the Bantu medical system, *personalistic* causes could also be due to bad relationships with one's relatives, friends and neighbours. In the traditional Bantu medical system in the Mara Region, just as in the ancient Greek medical system of Hippocrates, people support the *humoural* theory which explains that the body contains four types of liquid humours - blood, phlegm, yellow bile, and black bile - and that a person is healthy when the fluids are in optimal balance. In the *naturalistic* causes, illness can be caused by an excess or deficiency of one fluid compared to another. The balance of these fluids was caused by weather and diet (*cf.* Helman 2001). For example, inhabitants would be taking high caution with their children during the windy season in July and August in order to protect them from 'bad air' (*Jita/ Ruri/ Kwaya: Amayaga*) or during long rainy season (*Swahili: Masika*) from March to May and during the short rainy season (*Swahili: Vuli*) from October to December. The remedies for such imbalance include bloodletting, steaming, induced vomiting and diarrhoea or replacing the relevant shortage by food or traditional medicaments intake.

Blood is believed to be a vital liquid in the body. It symbolizes life to the extent that everlasting (long life) friendship (*Jita Ruri/Kwaya: Imuma*) would be contracted by friends sipping a droplet of each other's blood. On the other hand, menstrual blood is believed to cause contagious pollution, also believed by the Zulu ethno-cultural groups as described by Ngubane (1977).. During the menstrual period, the norms forbade women from participating in some society activities such as milking, harvesting or worshipping in order to avoid uncleanness (*Swahili: unajisi*), as this would pollute the produce and may bring bad fortune to the family or the society at large.

All ethno-cultural groups in the Mara Region have certain taboos (*Swahili: Miiko*) which restrain its members of the society for example not to drink or eat something which are restricted by the traditional values. There are several taboos known as *Emisilo* (*Jita/Ruri/Kwaya*). For example, the *Waruri-Wambogo* are not to eat hippo meat, not to smoke marijuana, not to kill a snake known as *Kifutu* (*Imiri*), not to kill a tortoise, and women are neither to decorate in dairy oil nor red rocky paint (10).

Consequently, it was believed that in any case of breaking a taboo, illness or bad luck would befall the deviant and or his or her family. Despite the indisputable positive contribution of some traditional medical practitioners in the Mara Region, albeit with some exceptions within a few ethnic groups, people hold some beliefs and practices which have negative impacts on people's health. Unfortunately, some of these practices are either enforced or assisted by some traditional medical practitioners. These practices include the following:

- Children teeth mutilation (infant oral mutilation) based on the belief of the existence of 'nylon teeth' associated with fever, diarrhoea to children is a fatal social propaganda spread from the coastal regions of Tanzania since the 1980s. The Dental and Oral Health Department of Serengeti Report (2009) reports approximately 75 identified teeth extractors residing in the Mara Region. More alarming, about 755 children who were admitted to the Musoma Regional Hospital between January and September 1999 with this problem, have died.
- Uvulectomies are done by traditional healers and a few quacks. The Dental and Oral Health Department of Serengeti Report (2009) indicates a total of 64 known uvulectomy 'specialists' in the district. Their work is based on the belief that they relieve people from unsettling coughing.

The same report shows that about 25% of people admitted at Nyerere Designated District Hospital the majority being children from this kind of bloody operations have died.

- Health risk behaviours related to the spread of HIV infections are attributed to unsafe mass male circumcisions conducted by traditional circumcisers, unprotected sexual behaviours in traditional forced widow remarriage known as ‘widow inheritance’, death cleansing rituals, and polygamous marriages.
- Female Genital Mutilation is still practiced mainly in Serengeti, Tarime and a part of rural Musoma. It results in not only the physical and mental suffering of women undergoing this traumatic traditional operation, but also in the psychological burden to some other uninitiated women who have to live in imposed fear created by men, causing social exclusions and less sense of belonging to their own community;
- Reckless swimming and use of waters of Lake Victoria, which harbours vectors which spread the parasitic disease of *bilharzia*. The giant Lake Victoria, with a surface area of 68,800 sq km is the world’s second largest fresh water lake. Before the introduction of the Nile Perch it was known for its enormous biodiversity of quite a number of different species of fish. Portions of Lake Victoria are presently contaminated, and yet without much caution, children and adults have continued swimming, bathing and using untreated water fetched directly from the area of Lake Victoria. The lake extends from urban Musoma, rural Musoma, to the Rorya district and part of the Bunda district and is proven to harbour vectors which are spreading *bilharzia*. Downs (2011) conducted a study on this topic, and Sezzy (2010) reported in *Mtanzania* on the research of Lwambo from the Medical Research Centre of Mwanza Branch, who discovered that *bilharzia* is not only affecting people who are swimming in Lake Victoria, but that it has caused a tremendous decrease of income from tourism as it has become a known problem to many tourists who do not want to risk their live by swimming in the lake.
- Barbaric life-threatening activities linked to some traditional healers and soothsayers. On grounds of psychosocial factors, such as superstition and myths over the perceived shortcut to increase the acquisition of wealth or success over a very short period of time without using entrepreneurial skill or effort, innocent human lives of people with albinism have been lost. This has happened in Tanzania and other places worldwide. As the Prime Minister of Tanzania, Hon. Mizengo Pinda once stated, that: ‘*These witch doctors are big liars; they are fanning Albino killings...*’, announcing that the Government would immediately begin revoking all licenses of traditional medical practitioners (*cf.* McNeil 2009). Targeted for their body parts, about 40 people with albinism were murdered in Tanzania since 2007, mainly along Lake Victoria. The bizarre rumours in different parts of Africa about albinos, including the belief that they fade away instead of dying and that their body parts can bring about supra profit, are callous delusions. All well-wishers, both national and international, such as the local government leaders, social welfare officers, security officers, religious leaders, NGOs including *Under the Same SUN*, and leaders of the organisation of traditional healers called CHAWATIATA are already in full engagement, using their expertise to put an end to such killings and any kind of harassment to fellow human beings (*cf.* Figure 6.5). The business people need to be educated to report all such criminals who are using the name of fortune-tellers and healers. Such incidences can add to the challenges facing Traditional Medicine (TM), albeit such incidences, those

involved are only a minority of all available traditional medical practitioners, most of whom serve their clients responsibly and satisfactory.

- Poorly balanced dietary intake and general health is a common problem hindering good health livelihood. The majority of the Mara Region inhabitants are mindful of the quantity of food intake, but not necessarily the quality. Every year, there are reports of children suffering from malnutrition and lack of particular vitamins, *e.g.* Vitamin A, in the Mara Region and in Tanzania as a whole. An increase of *Type II Diabetic* cases has been noted in the Mara Region's Health Authority Report (2010), highlighting both an irresponsible intake of 'junk food' generally stocked with high percentage of carbohydrates and fats, as well as a lack sufficient exercise leading to obesity among the youth and adults.
- The patriarchal attitude subordinates and suppresses the position and the role of women in the society. Women in the Mara Region, especially in the villages, are mostly seen as hard workers, but are enjoying less distribution of resources and produce compared to men. Sometimes, in a legendary manipulation, they are denied some nutritional intake such as eggs or meat from animals or fish in the name of 'respecting taboos'. Unequal opportunities for the schooling of girls are sometimes due to early, coerced marriages leading to families with ignorant and immature motherhood, which adds to poor maternal and child health.



Figure 6.5 Representatives of the Association of Traditional Medical Practitioners in Tanzania (CHAWATIATA) - Mara Region, Tanzania Albino Society, Mara Region, Albino Peace Makers, Arusha, The Mennonite Central Committee (MCC) and Kanisa la Mennonite Tanzania (KMT) Strategic Meeting on Formulation of an Organisation on Peace and Reconciliation in Musoma Municipality in February 2013
Source: Picture by Magiri- (Omwiunjo) - Kanisa La Mennonite Tanzania.

- The lack of routine health information reporting for external consumption. Despite the long-available Health Management Information System (MTUHA) and a number of developed indicators, most practitioners and their leaders in the modern health facilities have failed to effectively utilise their collected health data for their own quality assurance and improvement (*cf.* Chirangi-Schoenmaker 2010). This may be the result of the growing habit of considering reports as a requirement from the funding source by the sponsor or donor IDs for external consumption, instead of being considered as a necessity for internal use for decision-making and planning for health care.

Before the arrival of the colonialists, such beliefs and aetiologies would dictate people with health-related problems to seek consultations either from traditional healers, fortune-tellers, bonesetters, birth attendants or circumcisers. Despite the emphasis of the Government on the use of Modern Medicine (MM), during the colonial time as well as the steadily growing of the Complementary and Alternative Medicine (CAM) in the country, people make their own decision about the type of health services they seek, *i.e.* Traditional Medicine (TM), Modern Medicine (MM) or Complementary and Alternative Medicine (CAM). Such decisions depend on various factors, including background, education, belief, trust, knowledge, perceived morbidity, the type of illness or health problem, accessibility, affordability and type of health facility. Without doubt, clients would like to consult practitioners from all medical systems to collaborate in order to allow for quick and optimal choices in the available health care services in order to ease their shopping behaviours.

6.3.2 The Use of Medicinal Plants in the Region

Medicinal plants form the largest source of traditional therapeutics used by healers, traditional birth attendants as well as some bonesetters. Table 6.21 shows a list of some common medicinal plants and their use in relation to the restoration or improvement of health in the Mara Region and Tanzania as a whole.

Table 6.21 Commonly Used Medicinal Plants and Their Uses in the Mara Region

Local name	Genus & Species name and part used	Uses / Treatment against
<i>Likalekale</i> (Jita/Ruri/Kwaya) <i>Haruna</i> (Swahili)	<i>Aloe secundiflora</i> (leaves)	Warm leaves are applied to wounds. Leaf sap is drunk as an anti-emetic against vomiting and nausea.
<i>Ombulu</i> (Luo)	<i>Abrus precatorius</i> (leaves)	Juice from leaves is chewed to treat a cough.
<i>Otagalo</i> (Luo)	<i>Acanthus pubescens</i> (roots)	Decoction of pounded roots used against stomach problems.
<i>Mukilabhaigi</i> (Jita/ Ruri/Kwaya)	<i>Blepharis panduriformis</i> (whole plant)	Boiled in water, and decoction drunk for treating dysentery.
<i>Kitunguu Saumu</i> (Swahili)	<i>Allium sativum</i> (bulb)	Bulbs pounded in food to treat a cough.
<i>Isindura</i> (Jita/Ruri/Kwaya)	<i>Zaleya pentandra</i> (whole plant)	Dried, powdered and applied directly on athlete's foot and septic wounds. Roots are chewed with <i>Voandzeia subterranea</i> (<i>njugu mawe</i>) to shorten labour pains during delivery.

Table 6.21 Commonly Used Medicinal Plants and Their Uses in the Mara Region (Continue..)

<i>Nyamunogo</i> (Jita/Ruri/Kwaya)	<i>Lannea humilis</i> (roots)	Boiled in water. Decoction is drunk for treating anaemia and stomach pains.
<i>Lisalwa</i> (Zanaki/Jita/Ruri/Kwaya)	<i>Lannea schweinfurthii</i> (stem bark)	Boiled in water and drunk for treating syphilis, cellulitis, abscesses and oral candidiasis.
<i>Liluguyu</i> (Jita)	<i>Balanites aegyptiaca</i> (stem bark)	Soaked in warm water, the extract is drunk for treating asthma, dry
<i>Mijohoro</i> (Swahili) <i>Masongoma</i> (Ikizu, Kurya, (Jita /Ruri/Kwaya)	<i>Senna siamea</i> (roots)	Peeled, pounded and boiled, the decoction is drunk for treating gonorrhoea.
<i>Lisingisi</i> (Jita /Ruri/Kwaya)	<i>Boscia angustifolia</i> (stem bark)	The stem bark is boiled in water and drunk for treatment of mumps, dysentery and venereal diseases.
<i>Manywera manji</i> (Kurya)	<i>Maerua edulis</i> (roots)	Its infusion is taken orally for treating venereal diseases, especially gonorrhoea and syphilis. Roots are eaten during food shortages. The plant is poisonous; death occurs when eaten in excess.
<i>Injaga-nyabekwabi</i> (Jita /Ruri/Kwaya, Kurya, Zanaki, Ngoreme)	<i>Cannabis sativa</i> (shoots and leaves)	The shoot is ground, soaked in warm water, and the extract is gurgled for oral thrush, and drunk and retouched for vaginal ulcers. The powder is sprinkled on boils. Leaves are soaked and drunk to expel tapeworm.
<i>Linyago</i> (Zanaki, Ikoma, Jita)	<i>Terminalia mollis</i> (root bark)	Decoction drunk against urine-blockage, kidney problems, diarrhoea, and dysentery. Stem bark decoction is drunk for jaundice treatment, and infusion is applied as drops for eye infection.
<i>Nyaseko-indume</i> (Kwaya, Ruri, Jita) <i>Imangwe</i> (Ruri)	<i>Felicia grantii</i> (plant sap and roots) <i>Senecio discifolius</i> (whole plant)	Sap is used against eye infection, while roots decoction is drunk for stomach pains Decoction of the whole plant is drunk for treatment of syphilis. It is more effective when combined with <i>Harrisonia abyssinica</i> .
<i>Maua</i> (Swahili) <i>Mava madongo</i> (Luo)	<i>Tithonia diversifolia</i> (leaves)	Soaked in water and bathed for skin infections. Concentrated macerate is drunk for stomach aches.
<i>Nyamata</i> (Jita /Ruri/Kwaya)	<i>Euphorbia heterophylla</i> (whole plant)	Whole plant is boiled in water, and decoction drunk for typhoid fever.
<i>Minyaa</i> (Swahili), <i>Masongorwa</i> (Jita /Ruri/Kwaya)	<i>Euphorbia tirucalli</i> (plant latex sap)	Drops in the eye treat ophthalmic infections. Root decoction is drunk to treat gonorrhoea and syphilis.
<i>Buleba-busungu</i> (Jita /Ruri/Kwaya)	<i>Crotalaria cf. Caudata</i> (leaves)	Decoction is drunk to treat threatened miscarriage. Powder mixed with oils is applied topically to treat skin diseases.

Table 6.21 Commonly Used Medicinal Plants and Their Uses in the Mara Region (Continue..)

<i>Gabunyunywa / Obhunyunywa</i> (Jita /Ruri/Kwaya, Ikizu, Zanaki)	<i>Leonotis nepetifolia</i> (leaves)	Juice from fresh ground leaves or dry powder is applied fresh on septic wounds, leaves are boiled and the decoction is drunk for treatment of convulsions.
(Ga) nyabhundege (Zanaki, Jita /Ruri/Kwaya)	<i>Crotalaria retusa</i> (leaves)	Juice used as drops against eye infection, while the leaf infusion is bathed for skin diseases.
Bigeye (Jita), Olugiligili (Ruri)	<i>Acacia brevispica</i> (leaves)	Pounded leaves are rubbed on the infected swollen part of the body or dressed on the abscess.
Bisanjawe (Jita/Ruri/Kwaya)	<i>Dichrostachys cinerea</i> (roots)	Boiled in water and drunk for treating venereal diseases. Leaves are chewed and swallowed as a snakebite antidote.
Likuyu (Jita/Ruli/Kwaya)	<i>Ficus sycomorus</i> (stem bark)	Boiled in water and drunk, treating fungal infection of the gut, abscess, boils, peptic ulcers and jaundice. The same is chewed for treating vaginal/anal infections
Likukubi (Jita/Ruri/Kwaya)	<i>Boerhavia coccinea</i> (leaves and roots)	Infusion is gargled for oral candidiasis and canker sores (aphthous ulcers). Root decoction is taken orally for the same ailments
Binyafwira (Jita/Ruri/Kwaya)	<i>Jasminum fluminense</i> (leaves)	Macerated in cold water then drunk to treat female infertility. Paste dressed on the affected area to treat cellulites and abscess.
Rikararungu (Kurya)	<i>Argemone mexicana</i> (shoots)	The juice (latex) from different parts of the shoot is applied directly on wounds and sores.
Mpingo (Swahili)	<i>Dalbergia melanoxylon</i> (leaves)	Pounded leaves are used to massage swollen body parts.
Liyebhete (Jita/Ruri/Kwaya)	<i>Erythrina abyssinica</i> (stem bark and roots)	Boiled decoction is drunk for curing diarrhoea, dysentery and jaundice.
Mutungutu (Zanaki) Lijare (Jita/Ruri/Kwaya)	<i>Lonchocarpus eriocalyx</i> (stem bark)	Boiled in water, decoction drunk to treat cough and stomach pain.
Mtemanjofo (Jita/Ruri/Kwaya)	<i>Ormocarpum kirkii</i> (roots and leaves)	Root decoction is drunk against fever. Leaves paste used for dressing a wounded area.
Nyakasorogo (Jita/Ruri/Kwaya)	<i>Rhynchosia sublobata</i> (roots)	Soaked in warm water, the infusion is drunk for treatment of bloody diarrhoea
Binyambe (Jita/Ruri/Kwaya)	<i>Rumex usambarensis</i> (shoots)	Pounded, soaked in hot water, the infusion drunk for treatment of haemorrhoids.
Nyamtumuka (Jita/Ruri/Kwaya)	<i>Cardiospermum halicacabum</i> (leaves and shoots)	Mixed with fats, the paste is used for dressing an abscess. Seeds are powdered for treatment of septic wounds.
Ifufya (Jita/Ruri/Kwaya) Kidua (Swahili)	<i>Buchnera speciosa</i> (roots)	Pounded and macerated in water, the extract is gargled for dental problems.
Lisawa (Jita/Ruri/Kwaya)	<i>Harrisonia abyssinica</i> (roots)	Boiled decoction is drunk for treatment of fever, malaria, diarrhoea and abscesses.
Lifubefube (Jita/Ruri/Kwaya)	<i>Withania somnifera</i> (roots)	Used for treating children convulsions. Root powder is sprinkled on the nipples to enable babies to breastfeed.

Table 6.21 Commonly Used Medicinal Plants and Their Uses in the Mara Region (Continue..)

<i>Echumya</i> (Jita/Ruri/Kwaya)	<i>Waltheria indica</i> (leaves)	Powdered leaves are sprinkled on fresh wounds.
<i>Lufyambo</i>	<i>Abrus precatorius</i> (fruit)	Mixed with salt, chewed and swallowed for treating male impotence.
<i>Kerefu mzitu</i> (Swahili)	<i>Acacia schinifurtii</i> (roots)	Pounded separately and use as treatment for asthmatic patients.
<i>Kitunguu</i> (Swahili)	<i>Allium cepa</i> (leaves)	Used as antiscorbutic, anti-diabetic and aphrodisiac substance.
<i>Unkule</i> (Swahili)	<i>Aristolochia densivenis</i> (stem barks, root)	Snake venom antidote.
<i>Fivi</i> (Swahili)	<i>Artemesia afra</i> (leaves)	Anti-malarial
<i>Mwarobaini</i> (Swahili)	<i>azadirachta indica</i> (leaves and stem bark)	Anthelmintic, antifungal, anti-diabetic, antibacterial, antiviral, anti-infertility and sedative and non-synthetic insecticide. Treats 40 diseases including malaria and scabies.
<i>Kabichi</i> (Swahili)	<i>Brassica oleracea</i> (leaves)	Decoction for treatment of liver cirrhosis, dysentery, tonsillitis and loss of voice.
<i>Limao</i> (Swahili)	<i>Citrus limon</i> (fruit)	Supply of vitamin A, B, B ₂ & C; sedative, tonic, antispasmodic and diuretic substance.
<i>Mbwakambwaka</i> (Swahili)	<i>Deinbollia borbonica</i> (roots)	Boiled and used to treat hernias.
<i>Mnanaa</i> (Swahili)	<i>Emillia Sagittata</i> (pulp)	Antifungal treats <i>dermatomycosis</i> and ring worm.
<i>Mvuti</i> (Swahili)	<i>Lipia jaranica</i> (leaves)	Used as insect repellent.
<i>Peasi</i> (Swahili)	<i>Pyrus communis</i> (fruit)	Infusion and decoction of the barks; leaves used for treating diuretic and urinary complains
<i>Epo</i> (Swahili)	<i>Pyrus malus</i> (fruit)	Treats rheumatism, gout, liver, kidney diseases and digestive system.
<i>Mswaki</i> (Swahili)	<i>Salvadora persica</i> (stem, leaves and roots)	Used as toothbrushes. Relieve toothache and gum disease. Leaves are used as a mouthwash. Roots are prepared as ointment and rubbed on the face for headaches.
<i>Mzambarau</i> (Swahili)	<i>Vangueria infausta</i> (roots)	Decoction drunk to treat infertility.
<i>Mlifu</i> (Swahili)	<i>Warburgia ugandensis</i> (stem barks)	Mixture used to treat rheumatic and spasmodic conditions.
<i>Mshegeshe</i>	<i>Myrica saliciforia</i> (roots)	
<i>Mutungutu</i> (Zanaki)	<i>Lonchocarpus eriocalyx</i> (stem bark)	Boiled in water, decoction drunk to treat cough and stomach pain.

Source: Johns *et al* (1996). Maregesi *et al* (2007) and Fieldwork Survey (2007)

6.3.3 Efforts on Collaboration between Medical Systems

In Tanzania, there are often two extreme attitudes regarding the traditional medical system. On the one side, people tend to romanticise the ethnomedical position of indigenous medical knowledge, beliefs, practices and products; while on the other side, people take a blanket opposition and denial on anything which is not based on the biomedical position. At the national level, some vigorous collaborative efforts can be observed which bring together proponents of the two sides in workshops and conferences either under the Desk of Traditional Medicine (TM) at the Ministry of Health and Social Welfare (MoHSW) or through the Muhimbili Institute of Traditional Medicine (MITM). Apart from publication of research on Traditional Medicine (TM), the Muhimbili Institute of Traditional Medicine also engages in manufacturing its own formulated herbal medicines in its GMP laboratory, as approved by the Tanzania Food and Drugs Authority as well as the Tanzania Bureau of Standards. The *ITM News Bulletin* (2011) reports that so far they have formulated 12 products, of which two are patented, as shown in Table 6.18, and four of their recent products and the corresponding diseases or health conditions which they treat are indicated. This commendable work of adding value to the indigenous medical knowledge through utilisation of modern medicine development knowledge and technologies avails an affordable quality of medicines to the public. Increased production and marketing can be achieved through active collaboration with other experienced and reputable pharmaceutical companies in the near future.

Table 6.22 Formulated Herbal Products by Muhimbili Institute of Traditional Medicine

Product	Disease / Condition	Product	Disease / Condition
	-Diabetes -Nutritional supplement		-Skin fungal infections -Allergic conditions
Morizela juice: Patented (TZ/P/07/00150)		Ravo cream: Patented (TZ/P/07/00151)	
	-Asthmatic conditions		Benign Prostate Hypertrophy
Pumu syrup		Prucan capsules	

Source: ITM News Bulletin (Vol. 3, Issue 1, December 2011)

The Ministry of Health and Social Welfare (MoHSW) declares that in Tanzania, there is no formalised system of collaboration between the conventional and traditional medical practitioners, as is noted under Section 2.1(c) in the *Tanzanian Traditional Health Practice*

Guidelines of the National Health Policy (July 1992). In the Mara Region, the common way of collaboration by a few practitioners has been experienced in referring outpatients across the systems. Another way refers to the incorporation and recognition of trained traditional birth attendants in assisting women in safe delivery and reproductive health by the district health authorities’.

Although collaboration between the traditional and modern medical systems is now generally accepted by a number of African countries such as Uganda, Zimbabwe, Tanzania, Mozambique, and Cameroon, the major question remains how to collaborate more effectively as the two systems at a certain level tend to differ in their theories of disease causation and management, while both underscore at the same time the shared objective of the improvement of human health. Furthermore, the reality of detestation as the result of the past ill treatment of traditional healers during the colonial era, followed by some missionaries, is still existing in the mind of some traditional medical practitioners as observed by Kayombo *et al.* (2007).

By choosing a moderate, realistic position, the researcher and fellow facilitators have realised the need to create an enabling environment for both the incorporation and collaboration between traditional and modern medical practitioners, which is paramount for the improvement of comprehensive health care delivery while discouraging any form of malpractice.



Figure 6.6 *Jadi na Utamaduni katika Afya (JUA) Project* Fellow Facilitators at the then *Community-Based Health Promotion Programme (JAMII- IMARA, Serengeti)*
Source: *Jadi na Utamaduni katika Afya (JUA) Project* work in 2005)

Simultaneously, the other objective is to enhance the abilities of people as health stakeholders to be able to make optimal choices of the utilisation of available health services. The Mara Association for Traditional Healers and Midwives (CHAWATIATA-Mara), in liaison with the *Jadi na Utamaduni katika Afya (JUA) Project*, are working together to enhance the capacities of

traditional healers, traditional birth attendants and circumcisers to be able to identify their own challenges on issues of the efficacy and safety of their services and products', their moral obligation and efficiency through collaboration with modern medical practitioners in the region. Facilitators of the *Jadi na Utamaduni katika Afya* (JUA) project (cf. Figure 6.6) will continue to focus on the educating of the people about the impact of the use of indigenous knowledge and culture to their own health. The *Jadi na Utamaduni katika Afya* (JUA) orientation hinges on Section 39(d) of the objectives of the National Policy on Traditional Health Practices Guideline of 1992 of the Tanzanian Ministry of Health and Social Welfare (MoHSW): '*To create an environment and institutions which will enable traditional health practices and medicine to be accepted and developed*'.

It has been reported by the CHAWATIATA Mara Chairperson, Omufumu Nyakiriga Nyakirangáni, that the exercise of enlisting all traditional medical practitioners in all districts of the Mara Region has been carried out to facilitate their individual registrations, and that every district now has its leadership and respective CHAWATIATA office. All these efforts shall in turn assist the Regional Medical Officer in giving them the necessary support while ensuring the continuous quality control as promoted by the *Tanzanian Traditional and Alternative Medicine Act* of 2002.



Figure 6.7 Facilitator and Traditional Medical Practitioners Attending *Jadi na Utamaduni katika Afya* (JUA) Workshop in Shirati.

Source: *Jadi na Utamaduni katika Afya* (JUA) Project work in 2006

As part of its programme, the *Jadi na Utamaduni katika Afya* (JUA) Project conducted workshops with traditional healers, birth attendants and circumcisers on different topics such as hygiene, HIV/AIDS, and the health policy and regulatory framework of the Ministry of Health and Social Welfare (MoHSW) related to Traditional Medicine (TM).

Figure 6.7 shows a picture of the participants and facilitators who participated in one of the *Jadi na Utamaduni katika Afya* (JUA) Project workshops.

Another major collaborative effort in the Mara Region especially in the Kuryan ethnic groups between the traditional and modern medical systems has been in the area of male circumcision seasons. Through the consent of the Kuryan elders' (*Wazee wa kimila*) and the inputs of the *Community Based Health Promotion Programme*, now known as *Jamii Imara*, the Nyerere Designated District Hospital and the *Jadi na Utamaduni katika Afya* (JUA) Project, the traditional circumcisers have been able to work hand-in-hand with the modern medical practitioners, such as the clinical officers, nurses and HIV/AIDS counsellors during the major Kuryan circumcision seasons in the Serengeti Districts since 2004. Because of this breakthrough undertaking, hundreds of Kuryan young men are now undergoing safe circumcision, where each operation by the traditional circumciser in sterile gloves is done by one, non-shared operating blade and in a hygienic environment. The modern practitioners involved help either in dressing the wound in clean gauzes, when needed, in stopping excessive bleeding, in applying pharmacological methods such as effective localised pain blocking and in topical analgesics to those circumcised men. They also provide appropriate health counselling advice to circumcisers as well as to the circumcised as the need arises. Again with the consent of *Wazee wa kimila*, some parents are free to bring their sons to the hospital for circumcision without being condemned at some minimal level of stigmatisation which still exists, especially in some rural ethno-cultural villages of the Mara Region.

Traditional male circumcision is still a challenge in some other villages of the Mara Region, especially when it is done traditionally in unsafe mass numbers, as it increases the susceptibility of HIV infection in the region. The Government of Tanzania, through the Ministry of Health and Social Welfare (MoHSW) has also continued to support and facilitate the training of Traditional Birth Attendants in various health topics in their districts.

It is, however, noted that the syncretic fusion of Traditional Medicine (TM) and African religion in the region still renders it difficult for the most committed religious people, especially of the Christian faith, to cooperate openly with traditional medical practitioners and their products (*cf.* Flessa 1997).

Notes

1. Harassment and efforts to silence the indigenous knowledge of traditional medical practitioners have been documented by different writers including Feierman (1985) in *Struggles for Control: The Social Roots of Health and Healing in Modern Africa*. *African Studies Review*, Vol. 28, p. 119. Even Traditional Birth Attendants were described as 'angels of death' as documented by Lefebvre and Voorhoeve (1998) in *Indigenous customs in childbirth and childcare*. Assen: Van Gorcum.
2. A study by Newbrander and Sacca (1996) entitled *Cost Sharing and Access to Health Care for the Poor: Equity Experiences in Tanzania*, shows the adverse effects of cost sharing on people's health.
3. Perceived morbidity can be defined as the observation and interpretation of symptoms of illness which initiate the decision to seek and obtain medical help. This subjective picture may conform to the objective picture according to medical standards but need not necessarily do so (Slikkerveer 1990: 74).
4. Keto Mshingeni (University of Dar es Salaam) attests this as a preamble statement as the editor in chief for an international conference on the promotion of medicinal plants in 1991, in Arusha, Tanzania.
5. Muhimbili Institute of Traditional Medicine, part of the Muhimbili University of Health and Allied Sciences, presents an introduction on the extent of traditional healers and medicinal plants on its official website: <http://www.muhas.ac.tz/ITM1/aboutus.htm>.

6. A workshop conducted in April 2007, Mugumu was attended by 35 members of the traditional healers' association (which includes traditional birth attendants) known as CHAWATIATA. The workshop was moderated by the Community Based Health Promotion Programme, which was founded and coordinated by Jumanne Magiri and the researcher's *Jadi na Utamaduni katika Afya* (JUA) project in liaison with health workers from Nyerere Designated District Hospital as facilitators.
7. Congestion of a multitude of people traveling to one location, Samunge Village, which has poor infrastructure and unprepared area to accommodate such a flux in population in terms of food, water and shelter. There were reports of 8 deaths in the Daily News of 21/03/2011 by Marc Nkwame and social complains associated with the rush towards the 'miraculous cup'.
8. The World Health Organisation fact sheet number 134 issued on December 2008, retrieved on 25.09/2012 at <http://www.who.int/mediacentre/factsheets/fs134/en/> provides an updated collection of facts about Traditional Medicine (TM) worldwide.
9. The Service Availability and Readiness Assessment (SARA) is a methodology which has been developed in a joint venture by the WHO and the United States Agency for International Development (USAID) to enable efficient measuring and tracking progress in medical systems. The tool is designed to assess and monitor the service availability and readiness of the health care system and to generate evidence to support the planning and managing of medical systems. It was built upon the previous methodologies for assessment such as the service availability mapping (SAM) tool developed by WHO and the service provision assessment (SPA) tool developed by ICF International under the USAID-funded MEASURE DHS project.
10. The Waruri Tribe, a clan of the Mara Region, has had their cultural and social records documented (not yet published) by Mzee Amos Mutaragara (2006) in his writings entitled *Historia ya Waruri*.