

**JIMMA UNIVERSITY**  
**COLLEGE OF NATURAL SCIENCES**  
**DEPARTMENT OF INFORMATION SCIENCE**



**KNOWLEDGE MANAGEMENT APPROACH FOR INDIGENOUS  
KNOWLEDGE OF TRADITIONAL HEALTHCARE PRACTICES: THE  
CASE OF HORRO GUDURU WOLLEGA ZONE, ETHIOPIA**

**BY**

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**OCTOBER, 2015**  
**JIMMA, ETHIOPIA**

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**A thesis submitted to the Department of Information Science, College of Natural  
Sciences, Jimma University, in meeting the partial fulfillment for the award of the degree  
of Master of Information Science in Information and Knowledge Management**

**BY**

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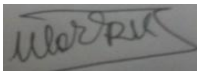
**Knowledge management approach for indigenous knowledge of traditional healthcare practices: the case of Horro Guduru Wollega Zone, Ethiopia**

**BY**

**Hambisa Mitiku**

This thesis entitled “**Knowledge management approach for indigenous knowledge of traditional healthcare practices: The case of Horro Guduru Wollega Zone, Ethiopia**” has been read and approved as meeting the requirements of department of Information Science in partial fulfillment for the award of the degree of Master of Science in Information Science (Information and Knowledge Management), Jimma University, Jimma, Ethiopia

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**Dedicated**

**To**

**My beloved wife and mother**

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## **Acronyms/ Abbreviations**

**CFIKS:** Centre for Indigenous Knowledge System

**COP:** Communities of Practice

**IIRR:** International Institute for Rural Reconstruction

**IK:** Indigenous Knowledge

**IKS:** Indigenous Knowledge System

**IPR:** Intellectual Property Rights

**IT:** Information Technology

**KM:** Knowledge Management

**KMP:** Knowledge Management Process

**PHC:** Primary Health Care

**SECI:** Socialization, Externalization, Combination and Internalization

**THC:** Traditional Healthcare

**THCP:** Traditional Healthcare practices

**TM:** Traditional Medicine

**WHO:** World Health Organization

**WIPO:** World Intellectual Property Organization

**WSMI:** World Self-Medication Industry

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## **Abstract**

*Indigenous Knowledge is an integral part of human culture which is transmitted orally throughout generations; in that, it plays an important role in the life of its developers by integrating the spiritual, social, economic and political aspects within a culture for a complete livelihood. Over the years, healthcare practitioners predominantly in developing countries have considered healthcare activities and achieved healthy by using their IK. Despite its potential for healthcare, IK is rapidly disappearing due to factors such as poor knowledge sharing habit, orally transfer of IK from one to the other; thus, the solution is managing by using KM approach. This study aimed to investigate the extent to which KM approaches can be used to manage IK of traditional healthcare practices in local communities of Horro Guduru Wollega zone. This study used descriptive research design through qualitative research method to collect reliable data about perception of disease and its main cause, the types of IK of traditional healthcare practices, the status of sharing and acquiring IK, indigenous self-medication and required from traditional healthcare practitioners and the barriers to effective management of IK of traditional healthcare practices. The respondents were taken from local communities (traditional healthcare practitioners and community members) and stakeholders (Health Bureau, Agricultural Bureau and NGO). Accordingly, 84 key respondents were chosen through purposive sampling. The qualitative data were analyzed using thematic content analysis. The analysis results have shown that, peoples in the local community conceptualize disease as the disequilibrium between body and spirit; whereas God, ancestral spirit and witches and sorcerers are the main cause of disease. The above cause's related diseases can be treated by using traditional healthcare IK such as by traditional medicine, physiotherapy treatment and spiritually treatment by self-medication and traditional healthcare practitioners. The acquisition and transmission of IK traditional healthcare was carried out in biophysical setting and socio-cultural setting. However, due to the infrastructural development such as health facilities, road, transportation and the emergence of new religion and the development of schools, the acquisition and transmission and the use of IK of traditional healthcare is at a decreasing rate. So, local community, community leader and elders, young generations, governments, higher education institutions, stakeholders and researchers should capture and manage IK of traditional healthcare practices to save it from ever loss.*

# **Chapter One**

## **Introduction**

### **1.1. Background of the Study**

Knowledge is what people employ to interpret and act on the world, feeling, thoughts, embodied skills, taxonomies and other verbal models (Barth, 1995). Knowledge has different bodies like Indigenous Knowledge (IK) that built up by a group of people through generations of living in close contact with nature and then being used by communities, peoples and nations that are indigenous (WIPO, 2001; Stoll and Von, 2004). Rural communities in the developing countries have an extensive base of widely available IK (Johnson, 1992).

IK refers to a complete body of knowledge, know-how and practices maintained and developed by people through generations, generally in rural areas (Flavier, 1995). It is unique to a given culture, tacit in nature, learned through repetition, not easily codifiable, orally communicated and embedded in practices and experiences of the communities with long histories of close interaction with the natural environment across cultures and geographical spaces (Sen and Khashmelmous, 2006).

IK is mainly practiced by rural communities in developing countries as a basis for local level decision-making in day-to-day activities of society like in agriculture, health care, education, natural-resource management (Warren et al., 1995). IK has recently been regarded as an important commodity in global health development (Correa, 2001). For example, the world market for herbal medicines has reached US\$43 billion, with annual growth rate of between 5% and 15%, which highlights the importance of IK for socio-economic development.

Due to the absence of health facilities, people living in rural areas are using indigenous plants as medicines from long ago; because this knowledge reaches them through experiences of parental generations (WHO, 2000). As WHO (2000) noted, proficient medicine by Yoruba tribe in Nigeria consists of knowing the nature of the disease as well as the things that will cause it to go away, thus healing the sick. Iroegbu (2006) reported that up to today, 80% of the Nigerian population still relies on indigenous medicine to meet their health-care needs.

The crucial role played by medicinal plants in the health care systems of many developing countries was reinforced by the Alma Ata Conference in 1978, which recommended that governments should give priority to utilizing traditional medicine in national drug policies and regulations (WHO, 2000). WHO highlighted the crucial role played by medicinal plants in the health care systems of many developing countries; in that, indigenous medicine is now recognized as an important healthcare resource due to its effectiveness and affordable cost (WHO, 2002). Yoruba tribe in Nigeria, for example, tends to rely on emotion, intuition, and dreams (Jessica and Solomon, 2006).

According to Cavender (1991), IK of traditional healthcare practices is widely accepted as traditional medicine. This method of health care developed out of people's perception of health, response to health care needs and access to health care facilities. IK of traditional healthcare refers to medical knowledge developed by indigenous cultures that incorporates plant, animal and mineral-based medicines, spiritual therapies and manual techniques designed to treat illness or maintain wellbeing (Courtright, 2000). As Endashaw (2007), the use of medicinal plants is as old as human civilization; in that, Ethiopia has glorious tradition of health care system based on plants which dates back to several millennia.

As the study of Mabunda (1999), medicinal plants and traditional medicine play an important role in the health care system of most developing countries; in this, nearly 80% of Ethiopians' population relies on traditional medicine prepared from medicinal plants. This study also reported as traditional use of medicinal plants is continuously decreasing with the easy availability of the modern medicines and unavailability of information of local plants of medicinal importance. IK of traditional healthcare practices is often revealed through customs, values, lifestyles and spiritual beliefs (Iroegbu, 2006). Most indigenous peoples transmits IK from generation to generation through traditional education and with adult practices knowledge of culture by a means of traditional songs, stories, legends, dreams, village meetings, taboos methods and practices; sometimes is preserved in artifacts handed from father to son or mother to daughter. In a similar opinion by Peweward (2002), observation, imitation, use of narrative/storytelling, collaboration and cooperation are indigenous learning style. Bates et.al (2009) stated that, there is a grave risk that much IK is being lost, as a result of traditional means of its transmission.

According to Tafesse and Mekonnen (2001), since the knowledge of traditional healthcare practice is transferred orally from generation to generation, basic information may be lost. This report also discussed that, local experiences which have been gained through generation to solve indigenous problems are disappearing from day to day due to lack of written documents, death of elders, migration of people due to drought and social problems, urbanization, influence of modern veterinary medicine and foreign cultures. Therefore, collecting and managing this IK associated with healthcare practices are important in order to pass the knowledge to the next generation since the IK of traditional healthcare practices is basis for healthy of human being.

To enhance the benefits that IK can provide in health care, there is a need to explicitly manage IK (Mostert and Snyman, 2007). As the realization of the importance of knowledge grows, increasing attention has been given to the need to manage the homegrown knowledge and IK in developing worlds' rural societies for their health care (Hens, 2006). KM which is mainly established in closed business systems to support business viability, competitiveness and growth with formal structures should not be restricted to closed business; but also be practiced in the local communities or open systems; because, open systems are comprised of different stakeholders with different organizational commitment, isolated information, experiences, skills and know-how tie together for the sustainable development (Mosia and Ngulube, 2005).

To manage IK more efficiently, some Indigenous knowledge System (IKS) have emphasized the development of a holistic approach namely knowledge management (KM) approach, with its theories, principles and practices (Kaniki and Mphahlele, 2002). KM with its emphasis on capturing, creating, preserving, sharing, and utilizing knowledge has already begun to show its importance in the management of IK of traditional healthcare practices in developing countries (Ha et al., 2008). So, it is important to promote KM practices in rural communities by strengthening the interaction between local networks and organizational structures. However, IK is predominantlyly tacit, highly personal and difficult to codify and diffuse, KM approaches can deal with tacit knowledge by converting it to a more explicit form and by enhancing tacit knowledge flow through human interaction; so that, it is not held in the heads of a few (Eftekharzadeh, 2008). Thus, this study is initiated with the main aim at which KM approach is used for managing IK of traditional healthcare practices before they disappear from this world.



## **1.2. Statement of the problem**

Many countries adopted unorthodox measures such as employment of traditional healthcare practices by using their own IK to fulfill their health care needs due to lack of adequate resources (Dennil, 1999). Despite little evidence about the effectiveness of traditional healthcare practices, many peoples in the world like in Africa, Asia and Latin America explored possibilities for developing their well-known and tested traditional healthcare practices for use in health care from locally produced materials to meet their health care needs. By this, most of the people are knowledgeable about the administration of a variety of traditional healthcare practices for curative and preventive purposes. The safety and effectiveness of the traditional healthcare practices is guaranteed by people's knowledge of the main health problems treated and the success in their treatment (Endashaw, 2007).

Despite the IK potential in traditional healthcare practices, mostly IK is not available in document form due to the transfer of IK is through oral traditions and demonstrations among generations, the wide spread of new religion and unevenly sharing of IK in the communities due to issues related to power (considered knowledge as a public good) and cultural differences and this confront IK with irreversible loss (Hamilton, 2003). Much IK is possessed by elderly people who are also aging and dying without a demonstrable plan to preserve their knowledge and transfer it to future generations (WHO, 2002). Sen and Khashmelmous (2006) reported that "IK is usually tacit knowledge, stored in people's individual or collective memories and often guarded carefully, hence the saying that each times an elder dies; it is as if a library had burned down".

Lack of a cohesive approach for managing IK in developing countries affects the ability of individuals to take advantage of generally available indigenous skills to improve their traditional healthcare practices (Akiiki et.al, 2006). Very little IK has actually been documented, limiting access and reach to a vastly valuable database. But, knowledge must be selected, stored and regularly updated for potential future value (Chisenga, 2002). More emphasis is needed to manage IK in a systematic way like other knowledge systems before it disappears altogether, since gaps or failures in the IKS may hold back rural development. Thus, it is important to develop an approach that will manage this knowledge; since Charyulu (1999) puts it as "Each year, 2% of the cultures and knowledge expressed by youth disappear

and in one century 99% will have disappeared and there is a risk that within one generation the knowledge could be lost forever”. Thus, it is important to determine an approach/strategy for managing IK of traditional healthcare practices before much of it is completely lost as KM approach plays a great role in managing IK; in that, it supports people from taking advantage of their skills and innovations in improving IK of traditional healthcare practices.

This research was initiated to KM approach for managing IK of traditional healthcare practices in Horro Guduru Wollega Zone. In Horro Guduru Wollega zone, there are numbers of traditional healthcare practitioners before the widespread of Christianity, the availability of health centers and the coming of commercial drugs. Because of the widespread of Christianity, the availability of health centers and the coming of commercial drugs and the gap in IK transfer such as the death of elders without transferring IK of traditional healthcare practices and its’ mode of transfer is oral (by word of mouth), the use of traditional healthcare practices decreases and threatened to be lost. Therefore, the necessary involvement should be done to rescue the loss of IK of traditional healthcare practices. So, the present research attempted to apply KM approach for managing IK of traditional healthcare practices in Horro Guduru Wollega zone.

### **1.3. Research Questions**

Key research questions formulated to collect data on the KM approach for IK of traditional healthcare practices are as follows:

- ❖ What are the perceptions of traditional healthcare practitioners and community members on disease and its main cause?
- ❖ What are the types of IK of traditional healthcare practices in the local community?
- ❖ How IK of traditional healthcare practices shared and acquired in the study community?
- ❖ What are the corrective and preventive care by self-medication and sought from traditional healthcare practitioners amongst people in the study communities?
- ❖ What are the factors that hinder the effective management of IK of traditional healthcare practices in the rural communities?

## **1.4. Objectives**

### **1.4.1 General Objective**

The study uses KM approaches to manage IK of traditional healthcare practices in the rural communities of Horro Guduru Wollega zone.

### **1.4.2. Specific Objectives**

- ❖ To explore and describe perceptions on disease and its main cause.
- ❖ To identify the types of IK of traditional healthcare practices in the local communities
- ❖ To investigate about the acquisition and transmission of IK of traditional healthcare practices in the rural communities
- ❖ To determine the current status of sharing of IK of traditional healthcare practices in the rural communities
- ❖ To describe indigenous corrective and preventive care by self-medication and provided by traditional healthcare practitioners amongst people in the study communities.
- ❖ To find out the barriers that hinder the effective management of IK of traditional healthcare practices in the rural communities

## **1.5. Significance of the study**

The study applies KM approaches in order to manage IK of traditional healthcare practices and provide the empirical evidence on IK of traditional healthcare practices that peoples use for corrective and preventive purpose. From this finding of the study, the local communities, the government, the knowledge holders and the researchers are beneficiaries in the following aspect.

The study identifies the knowledge of self medication and the knowledge holders. So, the local communities are beneficiaries in using and acquiring the IK of traditional healthcare practices easily. This study also helps IK holders to save their IK of traditional healthcare practices from being lost; as KM helps to preserve and pass to the next generation. The results of the study would be used for the researchers as a baseline for future studies on IK of traditional healthcare practices in this area. This study also helps government; in that, health care knowledge described in the study would make possible influence to policy change towards incorporation of beneficial traditional healthcare practices into the national health care systems. The study

would provide insight on the public health of the target communities and gives opportunities for education and training of the other communities on healthcare matters.

### **1.6. Scope and limitation of the study**

In every rural community, IK exists in tacit at individual and group levels. The scope of the study was the KM approach in managing IK of traditional healthcare practices in the rural communities of Horro Guduru Wollega Zone. The study was conducted in March/2015-September/2016 in rural communities of Horro Guduru Wollega zone by using qualitative research methods. However, due to time and budget constraints, the study was limited to IK of traditional healthcare practices of only two districts' of rural communities of Horro Guduru Wollega zone and due to lack of experts, the medicinal plants of the study areas are not captured.

### **1.7. Operational definitions**

**Knowledge:** "Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information" (Davenport and Prusak, 2000).

**Tacit knowledge:** is unwritten, unspoken, and hidden vast storehouse of knowledge held by practically every normal human being, based on his or her emotions, experiences, insights, intuition, observations and internalized information.

**Explicit knowledge:** - is knowledge that has been articulated, codified, and stored in certain media.

**Indigenous knowledge (IK):** - is an emerging area of study that focuses on the ways of knowing, seeing, and thinking that are passed down orally from generation to generation.

**Knowledge management (KM):** - is defined as a process that creates or locates knowledge and manages the dissemination and use of knowledge within and between organizations (Darroch 2003).

**Health:** - is a state of complete physical, mental, social and spiritual well-being rather than a mere absence of disease.

**Primary health care (PHC):** - refers to "essential health care" that is based on scientifically sound and socially acceptable methods and technology, which make universal health care universally accessible to individuals and families in a community.

**Traditional medicine:** - is the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness.

**Medicinal plants:** - are various plants used in herbals and thought by some to have medicinal properties.

**Rural community:** - is a society that is in a rural area (country side), A rural community comprises a group of inhabitants who live a rustic or country lifestyle.

## **Chapter Two**

### **Literature Review**

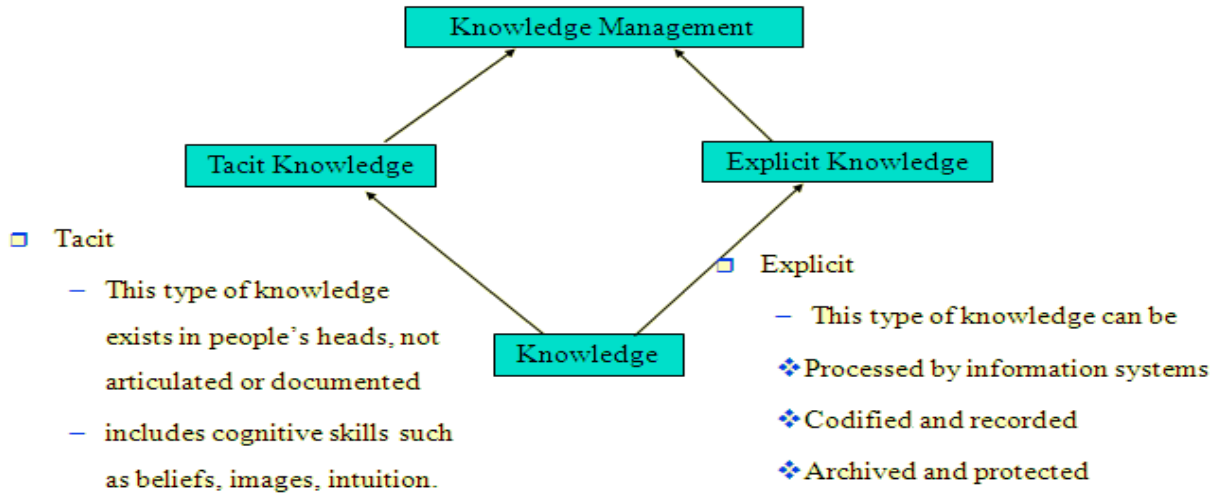
#### **2.1. Overview of Knowledge**

Knowledge is the combination of data and information added with expert opinion, skills and experience used in decision making (Davenport, 2000). It is a component of elements such as knowledge accumulation, utilization, sharing practices and ownership identification (Bellinger, 2004). Knowledge can be accumulated through externalization or internalization. The term knowledge utilization covers individual and group knowledge, learning from experience or innovative solutions. Knowledge sharing can also be both formal and informal. The knowledge ownership describes knowledge as an individual or group identity and to point at specialist or general sources of knowledge.

Knowledge is personalized or subjective or may be explicit and/or tacit, individual and/or collective (Nonaka, 2006). Tacit knowledge is a type of knowledge that is highly personal and hard to formalize as it is deeply rooted in action, procedures, routines, commitments, ideals, value and emotions; whereas explicit knowledge is formal, systematic knowledge that can be codified, written down and passed one to the others in the form of data in documents.

#### **2.2. Knowledge Management (KM)**

KM is a concept in which an enterprise gathers, organizes, shares, and analyzes the knowledge of individuals and groups (Broadbent, 1998). The transfer of knowledge from one person to another enables the recipient to benefit from the collected wisdom of the more experienced members of an organization or group; but, organizational experience is not direct relation with simple transfer of knowledge (Liao, 2003). KM is concerned with the systematic management of explicit and tacit knowledge and associated processes of creation, organization, diffusion, use and exploitation (Nonaka, 1996).



**Figure 2.1: Knowledge management hierarchy (Nonaka, 1996)**

Nonaka (1996) proposed the SECI (Socialization, Externalization, Combination and Internalization) model of knowledge conversion to describe the process of interactions between explicit and tacit knowledge. Nonaka models knowledge transfer is as a spiral process, not cyclical and each mode of transfer operates differently as depicted on the fig. 2.2 below.



**Figure 2.2: Knowledge conversion model (Nonaka, 1996)**

**Socialization:** - a process of converting tacit knowledge to tacit knowledge through observations, imitation and practice sharing that occurs without formal discussions.

**Externalization:** - a process of converting tacit knowledge to explicit knowledge as in building and sharing of paradigms and metaphors through formal discussions.

**Combination:** - a process of converting explicit knowledge to explicit knowledge as in building mission statements and other strategic documents through formal discussions.

**Internalization:** - a process of converting explicit knowledge to tacit as in learning through individual reflection.

Al Hawamdeh (2003) asserts that, KM encompasses the processes of the knowledge cycle such as identifying, organizing, developing and exploiting knowledge. However, knowledge has abstract and subjective elements and may not be managed unlike data and information (Sveiby and Simons, 2002; Christensen and Bukh, 2005). Nevertheless, Balasubramanian et.al (1999) considers knowledge as an object which can be managed as a module or packet.

KM has been successfully applied to improve business performances of many organizations in the developed countries and thus, most organizations in developed countries end up with better customer service, improved products, business processes and innovative new ideas for commercialization (Ichijo and Nonaka, 2007). However, since knowledge is a key resource for socio-economic growth, KM should also be applied in the rural areas of developing countries for equitable and sustainable development. Rural communities in the developing countries have an extensive base of widely available knowledge which is IK. While the organizational knowledge is used as a source for competitive advantage, the aim to which IK is utilized is for social advantage (Ikoja, 2006).

Having only Knowledge is not sufficient rather managing and connecting it with its application empirically or conceptually to desirable social ends. Knowledge can be managed by using KM strategy; in that, KM is used to integrate and share the diversity of IK in a community that desires to achieve developmental goals (Mosia and Ngulube, 2005). A strategy is a process of determining the mission, vision, major objectives, strategies and policies that govern the acquisition and allocation of resources to achieve some aims. IK strategies generally provide a way of connecting, knowing, feeling and doing. Like other knowledge, IK also needs to be managed on technical base (Yang and Yeh, 2009).



Hansen et.al (1999) considers KM in terms of codification and personalization approaches. The codification approach focuses on codifying, storing and reusing knowledge through a ‘people-to-document’ method in which knowledge is created into forms that are easy to distribute and to share. Meanwhile, the personalization approach focuses on personal contact and knowledge is created and shared through a ‘people-to-people’ method through the communication of people, socialization, networking and mentoring. By personalization approach, as World Bank (1998), recognition and identification, validation, recording and documentation, storage in retrievable repositories, transfer and dissemination are the essential steps and are the ways of IK transformation. Nonaka’s (1996) SECI (internalization, externalization, combination and socialization) model of dimensions of knowledge can be classified into codification and personalization strategies. The externalization and combination perspectives of the spiral focus more on codified knowledge whereas the internalization and socialization perspectives are concerned with personalization.

KM approaches can be used to enable the diffusion of tacit knowledge to cope with the dynamic world in the developing countries; in that, KM balances out interest and power differences and encourages knowledge exchange and learning (Dlamini, 2005 and Noeth, 2006). However, it is argued that the externalization and transmission of IK may separate such knowledge from its human agents and from the context, in which it is generated, transformed and re-generated (Raseroka, 2008). Further, there is a need to strike a balance between the desire to preserve IKS in existing databases and the importance of facilitating the continued performance of IK in its original context (Ngulube, 2003; Nzewi, 2005). Certain factors such as having an educated population to attract and apply new knowledge and supportive policies and to create an enabling environment for sustainable social change are needed to enable the developing countries to manage IK through KM practices as it is done in the developed world (Mchombu, 2007).

### **2.3. Indigenous Knowledge (IK)**

IK is knowledge that is unique to a given culture or society and passed by word of mouth in between generations (Warren, 1991). Sen and Khashmelmous (2006) describe IK as one type of knowledge which is tacit in nature, transferred orally, unique for local community and subjective which represents IK as local communities didn’t managed, formalized, jotted down

and codified. IK is a know-how, skills and practices, beliefs, representing generations' of experiences, careful observations, trial and error experiments and the product of native people's direct experience with nature and its symbiotic relationship with the social world and is crucial for community survival (Nakashima et al., 2012). The observations made by Dixon (2002) in Ethiopia, Kajembe and Kessy (1999) in Tanzania and Mudege (2005) in Zimbabwe on IK represented as IK is socially and culturally constructed in the local communities.

To Correa (2001), IK is the base for local-level decision-making in agriculture, health care, food preparation, education, natural resource management and a host of other activities, especially in rural communities. For example, the world market for herbal medicines has reached US\$43 billion, with annual growth rate of between 5 and 15 %, which highlights the importance of IK for socio-economic development.

Berkes (2008) describes IK as “a cumulative body of knowledge-practice-belief complex, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with environment”. Depending on knowledge-practice-belief complex, the author identified four levels of analysis of IK.

The first level of analysis is primarily concerned to the eco-cognitive dimension of IK, which corresponds to the set of mental constructions used in a specific ecological context or environment such as soils, plants, animals, topography or climate which is constituted by direct perceptions and observations. The second level of analysis is about practical dimension of IK that corresponds to the practical skills, techniques and tools employed for activities of everyday life, what to do, how to use nature, how to relate to people and to spiritual entities and how these activities are perceived. The third level of analysis is about the normative dimensions of IK which refers social institutions of knowledge that frame the processes of social memory, creativity and learning through designing and setting rules, regulation, norms and value systems. The fourth level of analysis is about philosophical dimension of IK which refers the worldview, which shapes environmental perception and gives meaning to observations of the environment.

### **2.3.1. IK acquisition and transmission: Theories and Models**

IK acquisition and transmission is described as the process of social production and reproduction in which knowledge, skill, behaviors, language and beliefs are communicated and acquired (Hewlett and Cavalli, 1986). According to this idea, IK acquisition and transmission is part of the socialization processes; thus, IK production and reproduction can be understood from the perspectives of social constructivist approach.

According to social constructivist approach, reality about peoples and the surrounding environment is a social construction in the course of socialization processes; whereas knowledge and skills construction is based on social perception of reality, encoded in cultural categories, communicated in language, shared by the group of people and reproduced by knower's or an epistemic community (Salas and Tillmann, 2004). In this case, IK is often constructed from what peoples observe, sense, heard, touch and smell and people's everyday life determines their knowledge, skill and behavior.

Rural children learn or acquire knowledge from their everyday life through interaction made with their parent, peer, siblings and grandparents and learn from the interaction made with the natural environment in which they grow (Warren and Rajasekaran, 1993). Therefore, IK transmission and acquisition is a teaching-learning process that can be conducted between learners and local biophysical and socio-economic settings that may not involve chalk and talk or pencil and exercise book; rather predominantly oral, often supported by demonstration.

A number of learning theories have been formulated regarding knowledge acquisition and the elements affecting it from child to adulthood. The Bronfenbrenner ecological systems theory of human development, later renamed as the bio-ecological systems theory is the theory focuses on human development as influenced by both internal and external environment, concentrates on human-environment relationship, which entails dependency of human beings on nature and vice versa, focuses on socialization process through which a child becomes a matured person through exposure to various conditions. The theory is found to be holistic and hence more applicable to understanding how people acquire IK from their everyday life.

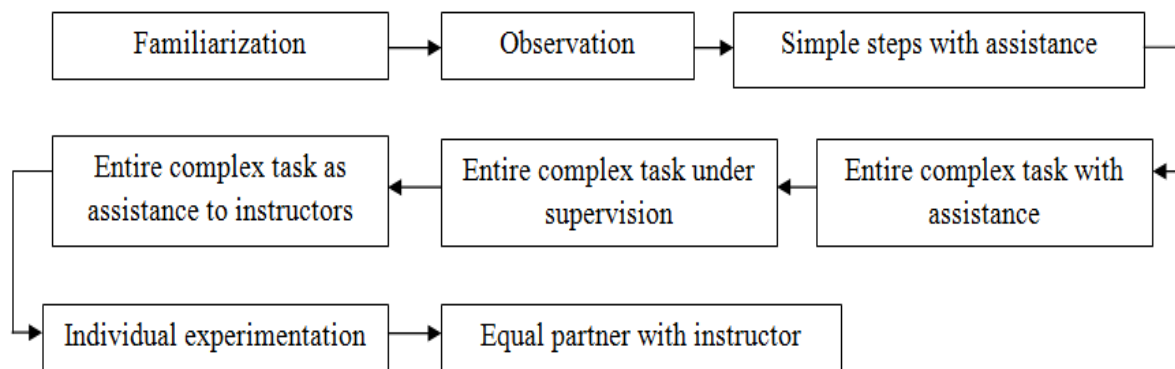
The theory defines the construct of development and the multi-system layers such as micro-, the meso-, the exo-, the macro- and the chrono-system of the environment that influence child development (Bronfenbrenner, 1979). The theory states that, a child's development is a product of context, process, time and individual's personal attributes in which the nature of the processes within the environment has an influence on child development. The environmental (biophysical setting) and socio-cultural setting in which a child grows and the ultimate interaction of the child with the external environment determine its development. As Bronfenbrenner theory dwells on human development as influenced by both internal and external environments, it seems as it is applicable to the IK acquisition by children and young people.

Acquisition of knowledge is part of human development, affected by the internal environment in which a child grows and the external environment. Therefore, IK acquisition can be seen from the perspective of Bronfenbrenner's ecological systems theory of human development. For instance, IK acquisition is affected by the interaction of learner with home, peer, family member and adults. According to Bronfenbrenner, this is seen at the first level, the micro-systems. Then at meso-systems, religious institutions, schools, neighbors are there influencing children's acquisition of IK. Beyond the meso-systems, the influence of mass media, world belief systems, world economic market, globalization and others are prominent in affecting the ability of children to acquire. There are also models that depict how peoples acquire IK about their locality. The models are presented in the following sections.

#### **a. Traditional learning sequences**

Learning in traditional society may involve experiential activities through which knowledge and skills are acquired through verbalization, observation and imitation in daily tasks. It is contextual; in that, every part of social life is connected to belief system and practices (Brien, 2008). Ohmagari and Berkes (1997) in their study of the acquisition of IK set traditional learning sequences, through which IK and skills are acquired. The model consists of eight stages of learning in which an individual is expected to acquire IK and skills. The learning process in this case is more of traditional, embedded within the everyday life of the local people.

As it is shown from the below figure 2.3, the learning sequence begins from familiarization to the local biophysical and socio-cultural environment. It means that a child begins acquiring knowledge about the environment when exposed to and gets familiar with it. Children, in their early childhood period, observe, try to understand their environment through the interaction made with their parents and peers. They tend to imitate what their elders do and then create their own world. This can be achieved whenever they come in contact with nature. Through time, they develop knowledge and skills that help them to work independently without assistance. The learning process in traditional societies is therefore socialization processes that involve observation, inquiring, imitation and trying by oneself.



**Figure 2.3: IK traditional learning sequences (Ohmagari and Berkes, 1997)**

**b. Modes of IK transmission**



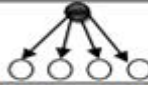

IK is clearly transmitted from one individual to another in a very personal way; in that, it is oral in its nature. The most common perspective regarding IK transmission is that, individual can acquire knowledge and skills about their locality through interaction between human-nature; interpersonal interaction among peer groups; social groups and individual-society interaction (Takako, 2003). In all cases, oral communication and observation are the two modes through which IK is acquired and transmitted.

Oral transmission commonly occurs through family lines from parents and grandparents telling narratives, including stories and songs, repeatedly, formally either at social occasions or informally between family members late into the night (Singh, 2005). It can also occur through contact between non family groups (social and peer group). Knowledge and skills gained

through oral communication needs to be concretized through repeated practices over time as IK and its practices are assimilated through experiences (Zarger, 2002). Therefore, children and young people must engage in practical activities to acquire knowledge and skills of their environment. IK which is not supported by practical experiences is unlikely to stay longer in mind. Direct experiences and contact with the natural environment provide learning opportunities and motivation to protect the environment (Miller, 2005).

**c. Model for paths of IK transmission**

As depicted on the Fig.2.4 below, IK transmission occurs in vertical, horizontal and oblique paths (Hewlet and Cavalli, 1986). Vertical path involves transmission from parent to children which is closest to biological transmission. In this mode of IK transmission, the learner is likely to become only receptive but innovation will be very slow to spread to others in the population unless other modes of transmission are employed along with parent to child transmission. On the other hand, horizontal path involves knowledge transmission between two individuals of the same generation, while oblique path involves a transmission from non-parental groups to the parental generation to members of the filial generation. The diffusion of innovation is relatively faster in horizontal and oblique transmission as the transmission occurs between any two individuals irrespective of their relationships (Hewlet and Cavalli, 1986).

Some characteristics	Modes of cultural Transmission			
				
	Vertical	Horizontal	One to many	Many to one
Transmitter	Parent	Unrelated	Teacher/Media	Older members of the social group
Transmittee	Child	Unrelated	Pupils/audiences	Younger members of the social group
Acceptance of innovation	Intermediate difficulty	Easy	Easy	Very difficult
Variation b/n individuals and within population	High	Can be high	Low	Lowest
Variation b/n groups	High	Can be high	Can be high	Smallest
Cultural evolution	Slow	Can be rapid	Most rapid	Most conservative

**Figure 2.4: Path of IK transmission (Hewlet and Cavalli, 1986)**

### **2.3.2. Sharing IK of traditional healthcare practices**

IK refers to the knowledge, innovations and practices of indigenous groups in matters related to agriculture and environmental management, medicine and health, art and language (Nakata and Langton, 2005). IK is predominantly tacit, embedded in the practices and experiences of its holders commonly shared and expressed locally by orally or tradition by using different folklore activities such as song, proverbs, poems, drama, stories, symbols, dances, rituals, architecture, arts, and crafts through personal communication and demonstrations from the teacher to the apprentice, from parents to children, from neighbor to neighbor (Franklin, 2008). As Franklin (2008), these folklores are performed in socio-cultural events for empowering the peoples with the relevant knowledge for condition at hand.

IK is usually shared and exchanged within social networks, with individuals making use of their primary networks (family, friends, neighbors, members of the community) and secondary networks (other contacts and relations outside their primary networks or closer circles such as organizations, work or business contacts and other intermediated contacts), not only to obtain their information and gain access to new knowledge, but also to share it (Arevalo, 2007). In these primary networks, the oral tradition and empirical learning are the principal ways of transmitting knowledge. The codification of the tacit and explicit knowledge which exists in the local communities is complemented by the secondary network (Arévalo, 2007). Thus, IK is commonly created and shared in the primary social networks, while explicit sources of knowledge such as print format play a supplemental role.

However, IK is not equally shared and distributed in the communities; social dimensions (age, gender, status, wealth, political influence) affect perceptions, actions and access to knowledge resources in the communities (Fairhead and Leach, 1994). Resistance to change and social relevance as a control mechanism to transmit what is perceived as significant and omit the rest over a period of time have largely limited the sharing of IK (Meyer, 2003; Tella, 2007). IK sharing is also inhibited by attitudes, perceptions, norms, values, belief systems and security mechanism of the local people to protect their own intellectual property inherent to indigenous people (Meyer, 2009).

## **2.4. IK of healthcare**

WHO (2010) defines health care as the diagnosis, treatment and prevention of disease, illness, injury and other physical and mental impairments in humans. It is delivered by practitioners in medicine, chiropractic, dentistry, nursing, pharmacy, allied health and other care providers.

Healthcare can be provided as primary health care and community health care; in which primary health care is health care service that provided by nurses, physicians and other health providers; whereas, community care is accomplished through health care interventions such as food safety, surveillance, preventive and immunization campaigns delivered outside of health facilities and includes the services of professional health care providers in residential and community settings in support of self-care or self-medication and social care services or care provided by traditional healthcare providers (Simmons, 2009).

IK of healthcare is widely accepted as traditional medicine or traditional healthcare practices that are developed out of people's perception of health, response to health care needs and access to health care facilities (Hjelm, 1999). Traditional healthcare practice refers to the performance of functions, activities, processes or services based on a traditional philosophy that includes the utilization of traditional practice (Truter, 2007). Traditional medicine is defined in the traditional health practitioners Act (Act 35 of 2007) as "an object or substance used in traditional health practice for the diagnosis, treatment or prevention of any healing purpose including the maintenance or restoration of physical or mental health or well-being in human beings". Traditional healthcare therapies include medication therapies that involve the use of herbal medicines, animal parts and/or minerals and non-medication therapies if they are carried out primarily without the use of medication like manual therapies and spiritual therapies (WHO, 2002).

Regarding the use of traditional healthcare therapies, peoples identify the disease and its main cause to provide a holistic treatment from traditional healthcare therapies. As Sargent and Johnson (1996), disease is common to all societies, but differs in a way people conceptualize and treat them. By this, disease is a perspective of sickness that refers to some bio-physiological abnormality. In most African countries like Congo, Nigeria, Rwanda and South Africa, diseases are attributed to natural and supernatural diseases (culture syndrome disease)



in which natural disease causes includes, adverse climatic conditions, contaminated food and water and the process of ageing and supernatural causes includes, Supreme Being, witchcraft and sorcery and ancestral dissatisfaction (Peek, 1991). Natural diseases happen spontaneously and are not sent or made to happen. Therefore, it is believed that they do not last very long nor do they return very often and treated by using self-medication (Kriel, 1992).

Self-medication is defined by the World Self-Medication Industry (WSMI) as the treatment of common health problems with medicines especially designed and labeled for use without medical supervision and approved as safe and effective for such use. It is common for individuals to feel unwell at one time or the other and the innate survival instinct in humans' produces a tendency to treat them-selves by using home-made materials. Traditional healers with their herbal remedies divination treat both natural and supernatural diseases (Pelzer, 1998). According to Freling (1992), the three main elements of traditional African healing are prevention of the problem, determination of the causes and elimination of these problems.

It is an established fact those in traditional African communities, medicinal preparations developed from indigenous medicinal plant species have found application in the management of a wide range of degenerative medical conditions and diseases with culture that is informed by a specific set of cultural beliefs and practices (Posey, 2002). However, due to the prevailing socio-economic and political dynamics worldwide, Western-trained scientists and medical practitioners on the African continent have yet to take up the challenge to conduct large-scale validation of these medicinal entities through internationally recognized scientific methodologies and protocols. In this period, most of the Western-trained African academics and medical experts in South Africa lack an understanding of the economics and the utilization of scientifically approved medication derived from traditional medicine and how it stands to benefit rural economic development; and so far, none of the South African institutions of higher learning offer curricula on IKS (Posey, 2002).

## **2.5. Barriers to management of IK of traditional healthcare practices**

KM is a process of knowledge creation, acquisition, sharing, preservation and application of knowledge. The main barriers for effective management of traditional healthcare practices of IK were discussed under the following topics.

### **2.5.1. Barriers to the acquisition of traditional healthcare practices of IK**

Knowledge acquisition refers to the process of producing and developing the skills or knowledge in a given community. Since the society has to respond to emerging circumstances to meet the changing times, indigenous peoples also have adopted their knowledge over a period of time through the social (Holling, 1998). The major barriers that faced local communities when acquiring IK of healthcare practice were categorized as personal barriers, social barriers and external barriers (Croteau and Dfouni, 2008). To them, Personal barriers include poor recognition of IK and resistance to change, ignoring the IK system due to the formal education system, other communities were resistant to change and adopted IK in their practicing systems, which shows that they were comfortable with their personal experiences and thus it was difficult for them to acquire IK from other sources, lack of IK records, poor knowledge sharing culture and lack of a resource center.

Social barriers are related to poor recognition of IK, difficulties in knowing IK holders, conflicts at family level, existence of traditional structures, vernacular languages, customs and taboos, disappearance of plant species and poor knowledge sharing culture influence IK acquisition in the communities. External barriers include inadequate government efforts to recognize and record IK, to establish rural knowledge resource centers and to improve the existing Intellectual Property Rights (IPR) system.

### **2.5.2. Barriers to the sharing of IK of traditional healthcare practice**

Knowledge sharing is the activity of sharing or giving and/or receiving of knowledge. But, IK sharing especially in traditional healthcare practices is not equally shared and distributed in the communities as a result of barriers that inhibited sharing of IK that generally categorized into personal, social, technological, and external environment levels (Rankowana, 2009).

Personal barriers includes a poor recognition of IK, poor knowledge sharing culture, lack of trust, selfishness, differences in social-economic status in the local communities, growing some of local herbs was time demanding; and illiteracy. Social barriers were related to the poor recognition of IK; a poor knowledge sharing culture; disappearance of culture and practices that could influence knowledge sharing; occurrence of conflicts within the families; presence of traditional structures, customs and taboos that inhibit knowledge sharing; some of IK

holders required to be paid in order to share their knowledge; disappearance of vernacular languages; IK was suspected of being linked to witchcraft and the settlement of professionals from different ethnic backgrounds and intermarriage which limited sharing of healthcare IK.

Lack of leadership commitment was also found to be one of the major barriers for knowledge sharing activities at Air Force Centre of Excellence in the USA (Myers, 2006). It is thus important for the knowledge intermediaries to work closely with village leaders to nurture a favorable environment for knowledge sharing activities in the local communities. Problems related to the external environment include the failure of government to recognize and preserve IK, to establish rural knowledge resource centre, and relevant IPR.

### **2.5.3. Barriers to the preservation of traditional healthcare practice IK**

Preservation of IK is critical, because it ensures the continuation of the community and its knowledge. If IK is not recorded and preserved, the knowledge will be lost through the death of elders and traditional leaders in communities and will remain inaccessible to other communities, scholars, and development workers (Warren, 1991). Nevertheless, a report provided by the Australian Institute of Aboriginal and Torres Strait Islander Studies to the Secretariat of the Convention on Biological Diversity identified barriers to preservation of IK including political pressures, social and economic pressures, territorial pressures, poor recognition of IK, lack of efforts to preserve IK poor knowledge sharing culture, traditional structures, customs and taboos and high illiteracy level of the early IK custodians had undermined the preservation of IK.

Lwoga et.al (2008), identified poor knowledge sharing culture, perceptions, norms, values and belief systems also affect effective preservation of IK of traditional healthcare practices. The rapid change in the way of life of local communities has largely accounted for the loss of IK. Younger generations underestimate the utility of IKS; because of the influence of modern technology and education (Ulluwishewa, 1993).

## 2.7. Conceptual/Theoretical framework for the study

Attempts to manage IK of traditional healthcare practices in Horro Guduru Wollega zone is preceded by the use of IK of traditional healthcare practices in the zone decreases and threatened to be lost as a result of the wide spread of Christianity, the availability of health centers and commercial drugs, the death of elders without transferring IK; if any, orally to the generations. So, it might be important to develop approaches that manage IK since Charyulu (1999) puts as “there is a risk that within one generation the knowledge could be lost forever.”

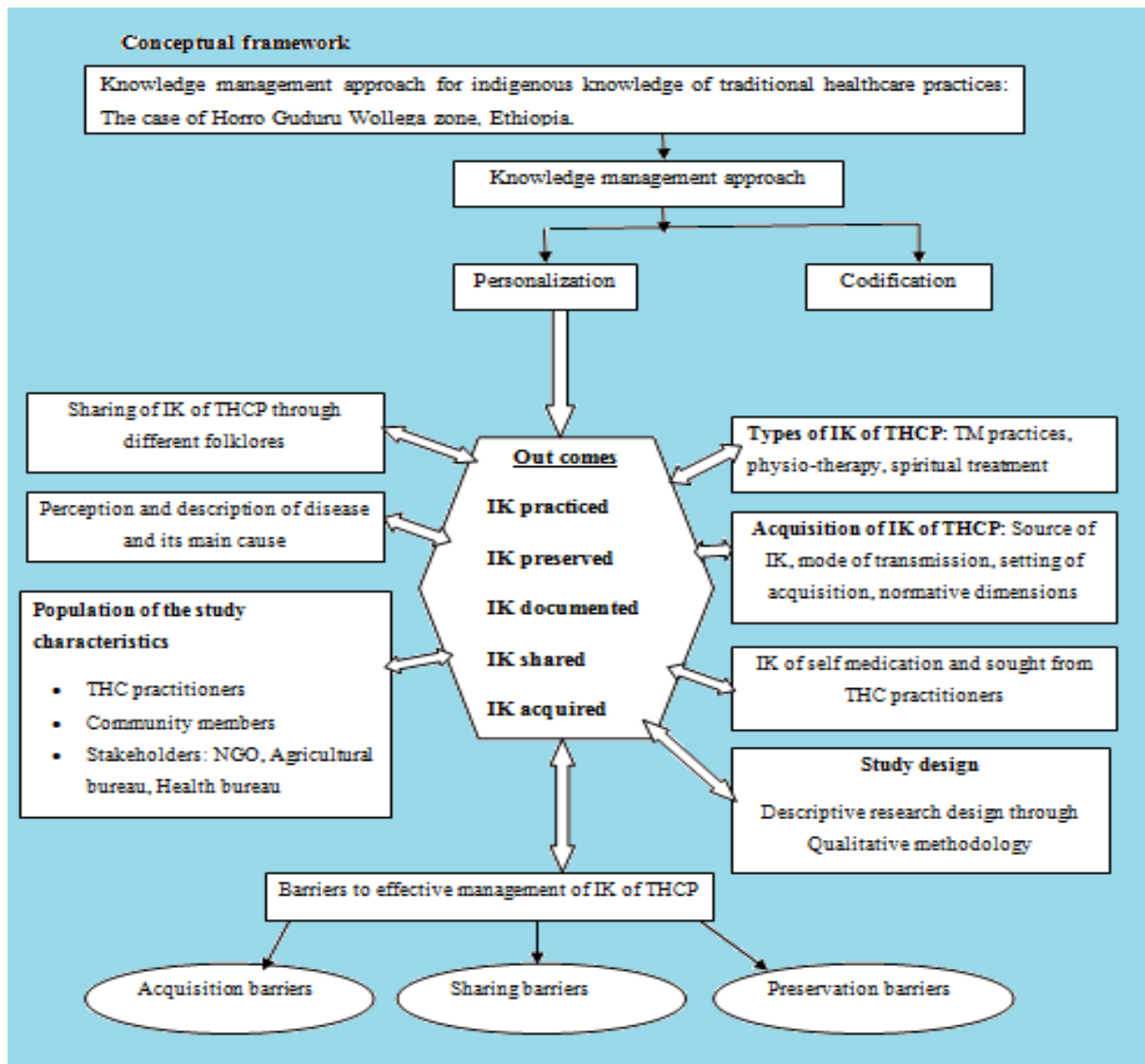


Figure 2.5: Conceptual framework for the study

The study has demonstrated how KM approach is used in managing IK of traditional healthcare practices. KM approaches plays a role in managing IK of peoples and supports them from taking advantage of their skills and innovations (Lwoga and Nglobe, 2008).

Hansen et.al (1999) considers KM in terms of codification and personalization approach. Codification is viewed as a people-to- document approach; in that, it involves capturing explicit knowledge to make it for further reuse. Personalization is viewed as a person-to-person approach; in that, it involves using interpersonal relationships to mobilize and use personal knowledge to solve customized problems. So, this study considers personalization approach which focuses on managing knowledge through people-to-document method.

By this method, the study includes ideas related to keeping the presence of IK practices among generations, IK preservations, IK documentations, IK sharing and acquisitions among the generations and to save IK from ever lost. Accordingly, the study understands the description and perceptions on disease and its main cause, different types of IK of traditional healthcare practices, the sharing and acquisition of IK of traditional healthcare practices, indigenous and corrective cares by self-medication and sought from traditional healthcare practitioners and factors that affect the management of IK of traditional healthcare practices from the perspectives of community members, traditional healthcare practitioners and various stakeholders such as NGO, Health bureau and Agricultural bureau by using qualitative research approach.

By the description and perception on disease and its main cause, even if the local communities have similar language, culture, life style, they have different perspectives on disease and its main cause. By this, understanding the disease and its main cause is used to offer a holistic treatment that involves corrective and preventive care (Pender and Nola, 2005). The IK of traditional healthcare practices is practiced by the local communities by making close contact with natural environment. So, the type of IK of traditional healthcare practices is different place to place. However, traditional medicine practices, physiotherapy and spiritually treatment are the three identified IK of traditional healthcare practices in the study community.

Even if IK of traditional healthcare practices is distributed regardless of sex and age, it is not shared equally among the communities. In this, as Sen and Khashmelmous (2005) puts IK as tacit knowledge in nature and transferred orally and Owuor (2007) found as IK is shared commonly among individuals and groups of communities through events such as folklore activities, IK of traditional healthcare practices is shared through different folklore activities such as poems, storytelling, dance, song.

IK of traditional healthcare practices has a source such as family, neighbors, church, local meeting from where it is acquired and transmitted; in that, family is the main source of IK of traditional healthcare practices. As Cavalli and Feldmen (1981) identified, there are vertical, horizontal and oblique mode of IK acquisition and transmission from the source to the receiver. IK of traditional healthcare practices is practiced in a bio-physical (natural environment) and socio-cultural setting; in which bio-physical setting is a practical laboratory and socio-cultural setting is an ideal laboratory. IK of traditional healthcare practices is practiced by local peoples as the cultures of the communities; so, the acquisition and transmission of IK of traditional healthcare practices is through normative dimensions practiced among the local communities. By using their IK of traditional healthcare practices, peoples give holistic corrective and preventive care by self-medication and sought from traditional healthcare practitioners if self-medication failed.

Also, as KM is related with the ideas of sharing, acquisition and preservation of knowledge, barriers that come in the form of these ideas are considered as the barriers to effective management of knowledge. The same is true with IK of traditional healthcare practices in that there are different barriers to management of IK of traditional healthcare practices such as acquisition barriers, sharing barriers and preservation barriers.

## Chapter Three

### Methodology

#### 3.1. Description of the study area

The study was conducted in two districts of rural communities of Horro Guduru Wollega zone namely Jimma Rare and Jimma Horro districts. Horro Guduru Wollega is one of the zones of the Oromia Regional state, Ethiopia. The seat of the zonal administration is Shambu town.

Jimma Rare is found in the eastern part of Horro Guduru Wollega Zone about 300 KM from Addis Ababa. It is bordered on the West by Jimma Horro, on the North by Guduru, on the East and South by the Guder River which separates it from the West Showa zone. The altitude of this Woreda ranges from 1540 to 3047 meters above sea level; Mount Tulu Biyyo is the highest point. Rivers include the Dangego and Wengele. Jimma Rare has a number of forest like Tullu Miju forest, Tullu kolba forest, Tullu Mane forest, Qunburo forest and Tullu Amhara forest. Those forests are used as the home of the wild animals and the place where traditional healthcare practitioners collect herbal medicine.

Jimma Horro district is located in Horro Guduru Wollega zone of Oromia Regional State, West Ethiopia about 315 KM from Addis Ababa. The seat of the district administration is in Hareto. The district has one long rainy season that extends from March to mid-October with mean annual precipitation of about 1800 mm (Olana, 2006). The elevation of the area is about 2490 m.a.s.l. and its geographical coordinates are 09° 38'N and 37° 04'E. There are natural and man-made forest areas which are the source of herbal medicine and wild animals including leopard, fox, buffalo, hyena, ape and monkey. The study area; Jimma Rare and Jimma Horro districts are selected based on much coverage of the forest used for traditional healthcare as possible (including protected areas, reserves and separated fragments), though not necessarily to sample in every spatial part of the forest. From Jimma Rare district; Dile Kolba and Beda Worke kebele and from Jimma Horro district; Gembo and Mekanesa kebeles were purposely selected based on their farness from health center, lack of health professionals and adoption of traditional healthcare practices.

### **3.2. Research Design**

For this study, descriptive research design was used through qualitative research method including likert scale measurement. Qualitative research method was employed to collect data from the rural communities of the study area; because it is a useful method to study human action in a natural setting, attempting to make sense of or interpret phenomena in terms of meanings people bring them (Creswell, 2003). So, for this study, the qualitative research method was used to explore and describe how peoples conceptualize disease and its main cause, types of IK of traditional healthcare practices, the sharing and acquisition of IK of traditional healthcare practices, indigenous corrective and preventive care and barriers to effective management of IK of traditional healthcare practices.

### **3.3. Population of the study**

The study was conducted in rural communities' of four purposely selected kebeles of Jimma Rare and Jimma Horro districts, Horro Guduru Wollega zone to collect quality and reliable data about IK of traditional healthcare practices. According to the survey reports of 2014 of the two districts, the total populations of these kebeles were estimated to 11,425; where, Dile Kolba kebele contains 2486, Beda Worke kebele contain 3521, Mekanesa kebele contain 2350 and Gembo kebele contains 3068. The study populations are traditional healthcare practitioners to obtain information about the disease and its main cause, types of IK of traditional healthcare practices and the sharing and acquisition of IK of traditional healthcare practices, the community members on self-medication and the type of traditional healthcare they sought from traditional health practitioners and barriers to effective management of IK on traditional healthcare practices. Other stakeholders such as Non-Governmental Organization (NGO), Health bureau and Agricultural bureau were selected and involved purposively to see their perspectives' on IK of traditional healthcare practices for the implementation of its' strategy.

### **3.4. Sample procedure and Sample Size**

#### **3.4.1. Sample Procedure**

For this study, respondents were identified and selected from each kebeles during each sampling week from local communities including traditional health practitioners, other community members and stakeholders including NGOs', Health Bureau and Agricultural Bureau to obtain general knowledge about the IK of traditional healthcare practices. The respondents were



selected based on seniority of age in the community (not less than 30 years old), local residency for a period not less than 5 years, appreciable knowledge of plants in the local dialect and well versed with their use(s), current or previous experience as herbalist, health professionals, foresters. Such selection was based on prior consultation with the local community leaders.

### **3.4.2. Sample size**

Equal numbers of sample groupings were selected from the four kebeles. Since IK is unevenly distributed in the local communities (IIRR, 1996); purposive sampling was used to select a total of eighty four (84) respondents from the local communities.

Accordingly, twenty (20) traditional health practitioners and forty (40) community members (including young generations and elders) and twenty four (24) stake holders (NGOs', Health Bureau and Agricultural Bureau) constituted the study sample. A sample of 20 respondents' (five (5) respondents from each kebeles of traditional health practitioners and 10 from community members) was selected purposefully. For stakeholders, the samples of twelve (12) (3 respondents) from each kebeles of Health Bureau, eight (8) (2 respondents from Agricultural Bureau of each kebeles) and four (4) (2 respondents) from NGO of the districts were selected purposefully based on their age and work experience for interviews.

## **3.5. Data Collection techniques**

In order to realize fully about IK of traditional healthcare practices, group discussion, semi-structured interviews and observations data collections techniques were conducted to collect information about IK of traditional healthcare practices in the study area.

### **3.5.1. Group discussion**

Focus group session was conducted in each kebeles with the traditional healthcare practitioners. The set of focus groups which contains five (5) members were formed through observation with traditional healthcare practitioner to find out about the perception of disease and its main cause, different types of IK of traditional healthcare practices, acquisition and transmission, sharing of IK of traditional healthcare practices.

The peoples who participated in group discussion were selected by the help of local/ kebele leaders. In this case, on the first day, the researcher made discussion about the objectives and ethics of the research with local leader. After that, the local leader takes another day for more discussion and identification of traditional healthcare practitioners with kebele committees.

By this, detail discussion was held with kebele committees and the identification of traditional healthcare practitioners were carried out. Accordingly, 5-7 traditional healthcare practitioners were identified; however, by the criteria of the study such as IK professionals, herbalist; five (5) traditional healthcare practitioners were purposively selected for group discussions. Next, the researcher started to make strategies and approaches how to get these practitioners and convince them. By this, the researcher tried to follow up those practitioners at their home and at their work place and tried to convince them by helping what they do, providing what they need; for example, local drink called areke. Even if the researcher tried to convince them in such away, some of the practitioners were unwillingness to participate because of the need of another payment and told as they have work that makes them busy. To overcome these challenges, the researcher was decided to pay for those who requires payment and for those who are busy by the work load as they substitute another person for their work by paying them. By this, practitioners were agreed to participate in group discussion. The same procedure was used for all the study area.

### **3.5.2. Semi-structured interviews**

Semi-structured interviews provide relatively systematic collection of data and at the same time ensure that important data are not forgotten (Strydom, 1998). In this study, two sets of semi-structured interviews were conducted with community members and stakeholders. So, for this study, interviews were conducted with 40 community members in the place where it is most comfortable for respondents, to find out description of disease, the trend and/or the experiences about corrective and preventive care by self-medication and sought from traditional healthcare practices, factors that hinder effective management of IK of traditional healthcare practices. Those stakeholders (NGOs', health bureau and agricultural bureau) were interviewed about the general overview of IK in traditional healthcare.

### **3.5.3. Observations**

During data collection phase, qualitative data was also collected through non-participant observation. In this study, key respondents were observed during ritual healing sessions. For this study, observation was helpful in the description and explanation of indigenous systems employed for prevention and corrective care and knowledge of self-efficacy.

### **3.6. Data analysis procedure**

Qualitative data was analyzed by using thematic content analysis. Analysis were done by producing themes such as indigenous description of diseases, main causes of diseases, indigenous healthcare practices, indigenous mechanisms used for preventive and protective care, corrective care by self-medication and sought from traditional health practitioners, sharing and acquisition of IK of traditional healthcare practices and barriers to management of IK of traditional healthcare practices.

### **3.7. Ethical considerations**

Ethical considerations required special attention during the study. Throughout the study period, the researcher and research assistants stand for by code of ethics. By this study, the research objectives were explained to the local authorities in the target communities and permission to conduct research was granted. The researcher has presented documentation about himself and the research before data collection in the field. During the research process, the researcher has ensured that all respondents were properly briefed about the aim of the study, their rights and roles in the study. The respondents were made aware that participation in the study was voluntary and that they were free to withdraw from the project at any time.

No harm was inflicted on or exposed the respondents to unnecessary risk. All the respondents have co-operative, fairly treated and their cultural preferences were taken into consideration, mature, responsible members of the community shared their experiences in aspects of indigenous traditional healthcare practices.

## Chapter Four

### Results and Discussion

#### 4.1. Results

##### 4.1.1. Socio-demographic characteristics of respondents

Even though, the socio-demographic characteristics of the respondents' were not included in the study objectives, it is necessary to present it; because, background of the respondents could partly explain the KM related activities in the study area. Thus, the socio-demographic characteristics of the respondents including traditional healthcare practitioners, community members and stakeholders who were participated on group discussion, interviews and observation were presented below.

##### 4.1.1.1. Traditional healthcare practitioners

Equal number of five (5) traditional healthcare practitioners was selected from each kebele for group discussion as depicted in Table 4.1.

**Table: 4.1: Socio-demographic characteristics of traditional healthcare practitioners**

S. No	Socio-demographic character of the respondents		Number of respondents	
			No	%
1	Gender	Male	16	80%
		Female	4	20%
2	Occupation	Farmer	12	60%
		House wife	4	20%
		Merchant	4	20%
3	Educational level	Elementary	6	30%
		Illiteracy	10	50%
		High school	4	20%
4	Religion	Orthodox	6	30%
		Protestant	5	25%
		Waqefata	9	45%
5	<b>Total</b>		<b>20</b>	

As presented in table 4.1, out of traditional healthcare practitioners, 16 (80%) were males and 4 (20%) of them were females. In relation to their profession, 12 (60%) of traditional healthcare practitioners were farmers, 4 (20%) of them were house wife and 4 (20%) of traditional healthcare practitioners were merchants. This data indicated as most of traditional healthcare practitioners were mostly farmers. Regarding to their educational level, 10 (50%) of them were illiterate, 6 (30%) of respondents were elementary level of education and 4 (20%) of them were high school. Thus, from this point, most of traditional healthcare practitioners are illiterate. By their religion, 6 (30%) of the respondents were orthodox, 5 (25%) of them were protestant and 9 (45%) were Waqefata. Thus, about half of the traditional healthcare practitioners' religion is mostly Waqefata.

#### 4.1.1.2. Community members

A total of forty (40) community members (ten (10) community members from each kebele) were selected as respondents for semi-structured interviews and socio-demographic characteristics of community members are presented in the table 4.2.

**Table: 4.2: Socio-demographic characteristics of community members**

S. No	Socio-demographic character of the respondents		Number of respondents	
			No	%
1	Gender	Male	28	70%
		Female	12	30%
2	Age	30-50	25	62.5%
		51-90	15	37.5%
3	Educational level	Primary	13	32.5%
		Secondary	10	25%
		Graduate	7	17.5%
		Illiterate	10	25%
4	Marital status	Single	8	20%
		Married	30	75%
		Divorced	2	5%
5	<b>Total</b>		<b>40</b>	

As it can be seen from table 4.2, in case of gender of the respondents', most of the respondents, 28 (70%) were males; whereas, 12 (30%) of them were females. Regarding their age, 25 (62.5%) of them are aged in-between 30-50 and 15 (37.5%) of the respondents were aged in-between 51-90. Concerning the respondents' educational level, 13 (32.5%) primary level, 10 (25%) secondary level, 7 (17.5%) graduate and 10 (25%) of them were illiterate. In the face of respondents' marital status, 8 (20%) were singled, 30 (75%) of them were married and 2 (5%) of the respondents were divorced.

#### 4.1.1.3. Stakeholders' of the study

Stakeholders including health bureau, agricultural bureau and NGOs are the participant of this study. The total number of these stakeholders are twenty four (24) where twelve (12) from health bureau, eight (8) from agricultural bureau and four (4) from NGOs operating in the Woreda.

**Table: 4.3: Demographic characteristics of stakeholders'**

S. No	Socio-demographic character of the respondents		Number of respondents	
			No	%
1	Gender	Male	19	79.1%
		Female	5	20.9%
2	Age	30-45	17	70.8%
		46-60	7	29.2%
3	Educational level	Diploma	9	37.5%
		Degree	13	54.2%
		Masters	2	8.3%
4	<b>Total</b>		<b>24</b>	

The above table 4.3 revealed the demographic characteristics of stakeholders of the study. Thus, gender, age and educational level of the stakeholders' were included. Accordingly, by the gender of stakeholders, 19 (79.1%) of them are males; whereas, 5 (20.9%) of the stakeholders are females. Regarding to age, majority of the stakeholders, 17 (70.8%) aged between 30-40 and 7 (29.2%) of them were aged in-between 46-60. Lastly, by their educational level, 9 (37.5%) are diploma, 13 (54.2%) are degree and only 2 (8.3%) of them are master holder among the stakeholder of the study.

## **Group discussion with traditional healthcare practitioners**

This section comprises results of data collected from traditional healthcare practitioners. The findings are presented as follows.

### **4.1.2. Perception and description of disease and its main cause**

The main objectives of analyses of data about diseases as perceived and described by the study respondents was to examine the respondents' disease conceptualization from their personal perspective. Analyses of the responses shows that, description of disease are based on aspects such as understanding of human existential conditions, giving names to symptoms and feeling of abnormality, giving reason for disease consultation and treatment.

#### **4.1.2.1. Perception and description of disease**

As the responses showed, respondents understood human existential conditions as humans are made up of three attributes; namely: qaama dhaabbataa (physical body), afuura (spirit) and namummaa (personality). The respondents showed that, physical body decomposes at death after spirit has died. The spirit was described as a total life. Personality was described as an individuals' celebrity. One's personality can be strong or light depending up on his/her physical body makeup. If one's personality is light, he/she is vulnerable to any disease and bad luck. Good health was understood as a balance between the body and spirit. Disease was considered as a state of disequilibrium between the body and spirit. The respondents provided that, their understanding of the human conditions is the basis of the type of holistic treatment that involves prevention and corrective care they offer to patients. As data shows, traditional healthcare practitioners could not make a distinction between disease and illness.

Respondents describe disease as physiological abnormality (dis-functionality of any body part such as liver, eyes, nose, lunges, heart or kidney may result in malfunctioning of the body and body systems such as urinary infections, heart disease and physical disability). Certain body symptoms such as feeling painful, cough, stomach pain and loss of appetite, difficulty in breathing, mental illness and depression are indications of particular diseases in their family members and others. The other descriptions of diseases are weakened spirit and ritual defilement. By weakened spirit, too thin spirit affects person's behavioral and emotional states such as mental illness, depression and anxiety and weight loss. Falling into a condition of ritual defilement predisposes people to disease such as witchcraft and sorcery. This condition usually

results from failure to listen to certain cultural taboos such as sexual relations with a widow, with a woman who has just got a miscarriage or a woman who has just given birth as well as taking food prepared magically for funerals, weddings and ritual.

#### **4.1.2.2. Main causes of diseases**

As data from the respondents provided, the causes of diseases are *dhukkuba Waaqa namatti fida* (God sends a disease as a plague), *dhukkuba karaa maatii namatti dhufu* (ancestral spirits causes disease) and *dhukkuba diina namatti fida* (witches and sorcerers brings illness to an individual's), ecological factors such as climatic conditions and biological and psychological factors such as heredity, accidents and stress were mentioned by the respondents as causes of diseases.

##### **a. Dhukkuba Waaqa namatti fida (God sends a disease as a plague)**

There are certain phenomena in the natural environment that are regarded as the main causes of disease and believed as sent by the Supreme Being. For example; flu, cough, common cold and fever resulting from phenomena such as changing weather conditions and certain hereditary disease, mental illness and epilepsy are believed as sent from the God. The people believe that, God punishes them by sending these diseases as a means of correcting the wrongs done.

##### **b. Dhukkuba karaa maatii namatti dhufu (ancestral spirit)**

Ancestral spirit often rewards the living through good health for themselves and their livestock. If they are forgotten or disregarded, they may remove their protection, the living and the dead mutually influence one another and bring diseases or death to descendants. According to the respondents, ancestral spirit has great influence and unlimited powers over live and death, sickness and health of the lives of the living descendents; even, nothing is impossible for the ancestral spirit. Each family is appreciative to keep and encourage supernatural relationships with their ancestral spirits. They fear that, as soon as this obligation is ignored; the ancestor will send the messages forcefully by inducing disease such as bad luck as impotency, miscarriage and infertility in women, mental illness, epilepsy and physical deformity. The respondents observed that, obey, respect and honor should go to ancestral spirits; due to one's ancestors serve as protective measures against unwanted health conditions.



**c. Dhukkuba diina namatti fida (witches and sorceress brings illness to individuals)**

The respondents recognized that, witches and sorceress within the communities may direct harm to their enemies by sending disease to them. Traditional healthcare practitioners testified that, witches perform evil acts by combining medicines and magic charm to affect a variety of problems. The most dreadful diseases that are caused by witches are poisonous substance that could be added in the victim's food which may cause physical deformity, insanity, painful body parts in one's stomach and permanent pain of body parts such as foot and hand and mental illness. Sometimes the medicines are placed in to certain objects or places, and once the injured party touches or walks along the place, he/she caught by the disease. These evil actions are attributed to unhealthy competition.

**d. Ecological factors**

The respondents observed that, people in a particular place are adjusted to environmental conditions; but, should they go to a completely different place, they become ill; because, they cannot adapt to the new environmental conditions. For instance, it was observed that diseases such as flu, cough and skin irritation are caused by change in environmental and atmospheric conditions. These conditions are accepted as natural phenomena that come and go and soon forgotten. The changes of climatic conditions from wet to dry, cold to hot causes diseases such as flu, whooping cough, malaria and common cold. For instance, malaria, which is associated with mosquitoes, is common in the rainy season, cold weather during winter months is the main cause of diseases such as common cold, flu and whooping cough and diseases such as tuberculosis, cough and whooping cough are most prevalent during the month of August when the wind and dust are most prevalent.

**e. Biological and psychological factors**

Traditional healthcare practitioners showed that, the human body may malfunction due to old age or due to injuries sustained from accidents are treated as normal disease and never be prevented or protected from affecting people. Vulnerability to certain diseases such as epilepsy, infertility and mental illness runs in certain families and is genetically achieved through inherited. These conditions are attributed to a problem and are referred to as inherited (genetically hereditary disease).

### 4.1.3. Types of IK of traditional healthcare practice and common diseases in the study area

As the data gathered from the respondents reveal that, there are three IK of traditional healthcare practices in the study community; namely, traditional medicine practices, physio-therapy (dhidhiibbaa) and spiritually treatment through consulting spiritual men, locally “ayyaantu” or curse removal process (ritual) locally known as “aagi”. By the dependence of symptoms of disease, treatment will be specified for unwell person and employed for the treatment of specific health problem; either by traditional medicine, physio-therapy and/or spiritually treatment. When asked if traditional medicine practiced, for which disease (for human being and/or for livestock disease) people in the community used IK of traditional healthcare. Most of the respondents said that, people in the community used traditional medicine for both human being and livestock disease treatment. Those diseases (human being and livestock diseases) that community members use traditional medicine for treatment are listed below in table 4.4 and 4.5. Table 4.4 and 4.5 shows list of human and livestock diseases respectively with the symptoms of the diseases that help the healers to identify the disease and the holistic treatment used to treat the disease. In that case, the healers identify the disease by observing its symptoms and the patients feeling.

**Table: 4.4: List of human being diseases encountered in the study area**

S. No	Name of disease ( in Afan Oromo)	Equivalent medical term	Remark
1	Dhukkuba Allaattii	Liver disease	Too thin, vomiting, crying
2	Budaa	Evil eye	Fainting, a lot of disturbing dreams, being alone
3	Dhukkuba sammuu	Mental illness	Changes in mood, personality, personal habits and/or social withdrawal, depression.
4	Maseenummaa	Infertility	It is possible to have regular cycles,
5	Garaa kaasaa	Diarrhea	Abdominal bloating or cramps, thin or loose stools, watery stool, sense of urgency to have a bowel movement, nausea and vomiting.
6	Dhukkuba gurraa	Ear disease	Hearing loss, ringing in the ear
7	Foroforii	Dandruff	White, oily looking flakes of dead skin that dot your hair and shoulders
8	Dhukkuba ijaa	Eye disease	Unable to see as normal, inflammation
9	Raammoo	Tape worm	Abdominal pain, vomiting. sickness, general weakness, Inflammation of the intestine (enteritis)
10	Cobxoo	Gonorrhea	Discharge from the vagina, pain or burning sensation while urinating, the need to urinate more frequently.

11	Baarollee	Tinea corporis	Have wet skin for a long time
12	Busaa	Malaria	Fever, chills, vomiting, headache
13	Dhukkuba garaachaa	Stomach ulcer	Bloating, heartburn, vomiting
14	Garaa ciniinnaa	Stomach ache	Vomiting, fever, inability to keep food down for more than 2 days.
15	Idda bofaa	Snake bite	Swelling and redness around the wounds, difficulty breathing, vomiting, blurred vision, sweating and salivating, numbness in the face and limbs.
16	Funuuna	Nasal bleeding	Signs of excessive blood loss include faintness, light-headedness, confusion
17	Kuukkii	Ameba	Fever, nausea, vomiting, and pain in the upper right portion of the abdomen, weight loss and an enlarged liver.
18	Nyaata lagachuu	Loss of appetite	Changes to the sensations of smell or taste can result in poor appetite
19	Laguu dheerate	Lengthy menstruation	Nausea or vomiting, toxic shock syndrome, diarrhea, fainting, or dizziness.
20	Qufaa	Cough	Tiredness, prevent from sleep
21	Roobbii	Ring worm	a ring-like red or silvery rash on skin and irritated around the ring,
22	Simbira halkanii	Leishmaniasis	
23	Dhukkuba sombaa	TB	Fatigue, Fever, Night sweats, chills.
24	Dhukkuba sukkaaraa	Diabetes	Frequent urination, Excessive thirst, increased hunger, Weight loss, Tiredness.
25	Cittoo	Scabies	Intense itching, a pimple-like rash, Scales or blisters, Sores caused by scratching.
26	Dhukkuba saree	Rabies	Chills, extreme tiredness, problems sleeping, lack of appetite, headache, irritability, anxiety, sore throat, vomiting
27	Dhukkuba kale	Kidney problem	Nausea, Vomiting, Loss of appetite.
28	Sariitii	Spider poison	fever, nausea, vomiting, headache,
29	Gaggabdo	Epilepsy	Cry out or make some sound, stiffen for several seconds to a minute and then have rhythmic movements of the arms and legs.
30	Dhukkuba ilkaanii	Toothache	Pain with chewing, hot or cold sensitivity, bleeding or discharge from around a tooth or gums
31	Huuba qoonqoo	Tonsillitis	Red, swollen tonsils, sore throat, painful swallowing, fever.
32	Dabala dhiigaa	Hypertension	Blood spots in the eyes, facial flushing, dizziness
33	Dhukkuba onnee	Heart disease	Discomfort, pressure, heaviness, or pain in the chest, arm, or below the breastbone
34	Mataa bowwu	Headache	Dull, aching head pain
35	Kintaarotii	Abdominal pain	Blood through anus, downing of spinal cord.
36	Nyaataa	Rheumatism	Fatigue, Fatigue, Morning Stiffness, Morning Stiffness

**Table: 4.5: List of livestock diseases encountered in the study area**

S. No	Name of disease	Equivalent veterinary term	Symptoms
1	Arraba hiddaa	Tongue infection	Dehydration, fever, dry mouth, thrush
2	Abbaa gorbaa	Anthrax	Swelling in the sore and nearby lymph glands.
3	Bishooftuu	Blackleg	Lameness, depression, loss of appetite and hot painful swelling on a limb.
4	Cinii	External parasite	Scratching, presence of tick is usually apparent on visual examination.
5	Ciniinnaa waraabessaa	Hyena bite	Wound
6	Dhiitoo harmaa	Breast swelling	Breast tenders or discomfort, changes to the breast skin's texture, heavy-feeling breasts
7	Dhiiga finceessa	Urine mixed with blood	Blood in urination,
8	Dhooqqee goge	Retained feces	Abdominal pain, swelling, hard or small stools
9	Dhora	External parasite	
10	Dhukkuba ijaa	Eye disease	Unable to see as normal, inflammation
11	Dhukkuba saree	Rabies	Loss of appetite, weakness and sudden death
12	Dhulaandhula	Leech	Ulcer, infection, itchy rash, red blotches, swelling
13	Diluu ture	Delayed placenta	
14	Gandii	Trypanosomiasis	Fever, severe headaches, irritability, extreme fatigue,
15	Garaa ciniinnaa	Stomach ache	Back pain, chest pain, constipation, diarrhea, fever, nausea, vomiting, cough, and breathing difficulty.
16	Gororsaa	Pasteurellosis	Develop a watery nasal discharge, sneezing, thick, whitish to yellowish nasal discharge
17	Garaa bokoksaa	Blotting	Distended left abdomen, no longer grazing, a reluctance to move
18	Huuqqina	Thinness	intermittent fever, poor appetite
19	Hudhaa	Tonsillitis	Sore throat, the tonsillitis is bright red and swollen
20	Idda bofaa	Snake bite	Local or general swelling, Bleeding, Intense pain, Weakness
21	Qaafira		
22	Kurruufsisaa	Action mycosis	Fever, minimal or no pain, swelling, red to reddish-purple lump on the face or upper neck, Weight loss.
23	Madaa gatiittii	Wound	Bleeding, infection
24	Mugsiisa lukkuu	Coccidiosis	Loss of appetite, loss of yellow color in shanks, unthrifty feathers, blood or mucus in the feces.
25	Qufaa	Cough	Irritation of throat, illness including
26	Raammoo garaa	Intestinal parasite	Diarrhea, vomiting, weight loss

#### 4.1.3.1. Traditional medicine practices

As respondents, traditional medicine prepared mostly from different medicinal plants. So, this section presents about traditional medicine in general.

- a. Source of traditional medicine:** - All traditional healthcare practitioners' said that, traditional medicine could be prepared from parts of plants such as leaves, barks, stems and roots for human being and livestock disease treatment. But, none of them agreed with traditional medicine could be prepared solely from animal product or minerals; but could be mixed with medicines prepared from plant parts.
- b. Major medicinal plants in the study area:** - Peoples in the study area use different plants for traditional healthcare practices of human being and livestock ailment. Those major medicinal plants are described in the table 4.6.

**Table 4.6: Major medicinal plants in the study area**

S. No	Local name	Habit	Plant parts used	Disease it cures	System of preparation, application and dosage
1	Laaftoo	Tree	Root	Stomach ache	One teaspoon of powdered bark is taken with tea every day for 3days
			Bark	Snake bite	The root ground together with root of <i>hada</i> and <i>gilxu</i> . Then mixed with finely crushed leaf of <i>tambo</i> and taken orally; 2-3 spoons once a day for 2 days.
2	Kosorruu	Shrub	Sap	Tinea corporis (Balole)	The affected area is massaged by mixture of the sap from shoot tip with latex of <i>bakkanniisaa</i> daily until the sign of the problem disappears
3	Muka arbaa	Tree	Bark	Stomach ache	1-2 inch of inner bark is chewed only at the time of illness
4	Qullubbii adii	Garden plant	Steam/sap	Body itching	2-3 bulbs grind up along with equal amount of <i>jinjibil</i> and chewed once a day or Rubbing the affected area by the mixture
				Bloat	The bulb (10-15 in number) pounded together with bark of <i>lolchiisaa</i> and <i>afanfartu</i> and given twice a day for 3 -5 days.
5	Qobboo	Herb	Leaf	Trachoma	The leaf is pounded and sieved to clean the inner eye by the filtrate trice a day.
				Rabies	Leaf is ground in small water and given to the victim every morning for 3 days in small 'areqe' glass.
6	Sariitii	Herb	Root	Impotency	The root together with roots of <i>urgeessaa</i> and <i>ejersa</i> pounded and given for the patient with one cup of tella 2-3 hrs before sexual works.
7	Lolchiisaa	Shrub	Steam	Rheumatic	Warming the leaf before fire and holding on affected area.
8	Qomanyoo	Shrub	Root	Malaria	Taking one raw seed every month for prevention.

			Leaf	Rheumatic	The leaf warmed on fire and applied to the affected area every night.
9	Anfaaree	Shrub	Leaf	Eye infection	The leaf is ground in to fine; the Juice is extracted and applied to the eye in drops, at night times.
10	Ceeqa	Shrub	Leaf	Skin rash	The leaf infusion is used to wash the affected body daily for a week
				Ecto-parasite	The leaf is ground along with barks of <i>sootallo</i> and sprayed on the area of problem (body, cloth, room, bed).
11	Arengama	Shrub	Root	Leech	The leaf infusion is given in to nose or mouth of the cattle.
				Headache	The root (1-2 inch) ground finely, enclosed in to thin cloth and smelled vigorously only once as the ache starts
12	Agamsa	Shrub	Root	Evil eye	The patient inhales the root burned in fire and the smoke
13	Papaya	Tree	Seed	Malaria	The leaf is crushed, rolled in paper and smoked by patient.
14	Caatii	Shrub	Leaf and bark	Anti-worm	The leaf crushed together with bark, eventually chewed and swallowed up.
15	Reejjii	Herb	Leaf	Scabies	The leaf/root infusion is used to wash the affected area and all the clothes that have been used by the patient.
			Root	Impotency	Drinking the powdered root with water and /or using it for tooth brush daily.
16	Godarree	Herb	Leaf	Leech infestation	The leaf or root infusion is added in to the affected cavity (oral, nasal) until the leech expelled
17	Bakkannisa	Tree	Leaf	Hook worm	The tips shoot with tip shoot of dhummuugaa powdered and baked with bread and eaten as a breakfast for a week.
				Tinea corporis (robi)	The latex from young tip is collected and applied in thick to the affected area every Wednesday and Friday.
18	Hidda reeffaa		Root	Tinea versicol or (Balale)	The root is ground along with root of dhangaggoo and rubbed over the affected area in strong sunlight
19	Afanfartu	Tree	Bark and root	Trypsis (Gandi)	The root and bark is grounded in small water, homogenized in it, and given orally with bread once a day for few weeks.
20	Qabarichoo	Herb	Root	Scabies	The root is powdered and painted on the affected area at bed time.
				Stomach ache	The roots is chewed and swallowed up
21	Sombo	Tree	Bark	Trypsis (Gandi)	The bark is crushed along with roots of andoodee and latex of <i>qobbo</i> and homogenized in water. The preparation is given in water cup once a day for 3 weeks
22	Coqorsa	Herb	Whole part	Fresh wound	The whole plant is crushed finely and sprayed over the fresh wound every night for some days.
23	Adami	Tree	Latex	Gonorrhea	Five-seven drops collected, baked with one cup of wheat powder and eaten to the empty stomach for 5 days.
24	Bargamo adi	Tree	Leaf, steam	Influenza	The leaf and immature bran water, the smoke inhaled by the patient

					nasally, during bed times
25	Qilxu	Tree	Latex	Snakebite	The root along with roots of lafto and bread (block) of <i>tambo</i> ground and served to the victim One tea cup only once.
26	Akuukkuu	Shrub	Bark	Gonorrhea, Amoeba and Hook worm	The bark ground along with bulb of <i>qullubbii adii</i> ; and tip shoot of <i>bakkanniisaa</i> . Then 3 spoons are taken once a day for 7-10 days.
27	Dhoqonu	Shrub	Bark	Red hair	The leaf or bark is used as soap to wash the hair thoroughly
				Placenta retention	The bark is soaked in boiled water and given to the cattle
28	Dhummuuga a	Shrub	Leaf	Rabies	The leaf together with the root ground in water and given in coffee cup to the patient at last for 4 weeks.
29	Kusaaye	Shrub	Leaf	Mosquito control	The leaf and stem burned, the smoke keeps away the mosquitoes.
30	Sotallo	Tree	Leaf	Tetanus	The bark is taken off and rolled on/tied on the affected area
				Ants problem	Taking off the bark & putting the bare stick in the camp of the ants.
31	Tamboo	Herb	Leaf	Leech	The leaf is chopped and poured in to nose/mouth of the cattle.
				Snake bite	The leaf /bark infusion is drunk or swallowing pieces of its bread.
32	Damakasee	Herb	Leaf	Pain, headache	The leaf and immature (soft) stem pounded in water, sifted and the pure liquid is drunk only once
33	Ejersa	Tree	Leaf	Male impotency	The leaf together with roots of <i>urgeessaa</i> pounded in water and given to the victim with tella before bed for few days.
34	Andode	Shrub	Leaf	Scabies	The affected body part is washed by the leaf infusion 2-3 times.
			Root	Rabies	The victims chewed the root of andode in the morning for 3 days
35	Dinnicha Oromo	Garden plant	Flower, leaf	Epilepsy	The leaf and flower ground together, and given to the victim, 2-3 teaspoon twice a day for 2 days.
36	Urgessa	Shrub	Leaf	Exto-parasite	The stem and leaf burned to fumigate the room or animal cage, so as to disinfect mosquito & flies.
37	Qobo	Shrub	Leaf, steam	Swelling, pain in ear	The leaf and stem infusion is made and drunk or dropped in to the ear. The leaf is also warmed before fire and put on the swelled gland for a while.
38	Gesho	Shrub	Leaf	Bloody urine	The leaf ground along with leaf of <i>hiddi waraabessaa</i> and given to the cattle in problem.
39	Gora	Shrub	Seed	Pain	The seed (dried) is swallowed once a day for 3 -5 days
40	Dhangaggoo	Herb	Root	Wound	The root is chopped, dried, made in to powder and bandaged/ rubbed to the body part in problem.
				Blood pressure	The root (1-inch) is chewed daily.
41	Cillaaddama	Herb	Root	Abdominal, pain, Stomachache	The root ground along with rhizome of <i>jinjibil</i> and bulb of <i>qullubbii adii</i> and drunken with coffee or tea in empty stomach every morning for 5-7 days.

42	Qundabarbare	Tree	Seed	Tonsillitis	The seed along with piece of <i>jinjibil</i> chewed slowly for a while. Eventually the whole thing is swallowed.
43	Alaltuu	Tree	Steam, leaf	Joint dislocation, physical worsening	The leaf ground along with immature stem, mixed with bread and given to the cattle in problem
44	Hidi waraabessaa	Shrub	Fruit	Toothache	The fruit sap is applied on affected tooth drop by drop.
				Coughing	The intact fruit is given orally, one fruit daily.
45	Hidi saree	Shrub	Seed, leaf	Tuberculosis	The seed & leaf ground together and taken with honey every morning for several months
46	Botoroo	Tree	Steam	Tooth ache	The stem is chewed on affected teeth for 5-10 minutes
				Stomachache	The juice is swallowed after chewing the young stem.
47	Faca'aa	Herb	Root	Trypsis (gandi)	The root ground along with roots of <i>bakkanniisa</i> and given to the cattle in problem every morning.
48	Gurgubbee	Herb	Leaf	Relapsing fever	The leaf is powdered along with 2-inch inner bark of <i>akuukkuu</i> and drunk with tea (1 spoon per cup) every day for 5 days.
49	Eebicha	Shrub	Leaf	Flariasis Ascariasis	The leaf is used as a soap to wash the whole body. The leaf infusion is made and drunk ½-tea cup before breakfast. Food and water are eschewed for 5 hours.
50	Jinjibila	Herb	Rhizomes	Asthema, Gastrite	The rhizome infusion is made and drunk as illness starts.
				Black leg	The rhizome is pounded along with roots of <i>afanfartu</i> and given to the cattle.
51	Qorxobbii	Herb	Leaf	Wound	The finely crushed leaf is applied topically.
				Gastritis	The leaf is chewed and swallowed in empty stomach daily for few weeks.
52	Shuultii	Herb	Root	Male sexual dysfunction	The root crushed and cooked with type of soup made from flesh of hen or cock.

**c. Plant parts used for treatment:** - In this study, the leaves, the roots, steams, fruit, rhizomes, barks, shrubs, seeds and herbs are used in traditional medicine preparation for human and livestock disease.

**d. Traditional medicine preparation:** - traditional healthcare practitioners have reported various skills associated with traditional medicine preparation including plant composition (whether single or combined), condition of plant material used (fresh or dry) and forms of preparation.

Accordingly, out of respondents, 13 (65%) of them said that, most remedies were prepared from single plant; whereas 7 (35%) of them said that traditional medicine is prepared from combined plant species. The result of conditions of plant part used indicated as they were



used mostly in fresh or dried. As majority of the plants can be used in both forms (fresh or dried), the chance of using the medicinal plants under different seasons of the year is maximized. Popular method of preparation of traditional medicine is crushing which accounts for 7 (35%), powdering 6 (30%), chewing 3 (15%) and concoction and decoction accounts for 2 (10%) each. Here all other methods can be used for human and livestock problem except chewing is used only for humans.

- d. Dosage of medicinal plants used:** - For dosage of medicinal plants, people of the study area used various local units of measurement such as finger index (for bark, root, and stem) for those medicinal plants which are expected to be dangerous, hand palm (for powdered plant medicine) for medicinal plants which can have effect but are not as danger as the above ones and determine the dosage during of administration as patients' preference; it may be in numbers for those medicinal plants (for leaves, seeds, fruits, bulbs, rhizomes, flowers and latex) that have no any observable side effect.

Traditional medicine prepared from *qullubbii adii*, *loomii*, *qomxaaxxee* and other medicinal plants applied dermal. Recovery from the disease, disappearance of the symptoms of the diseases, fading out of the disease sign and judgment of the healer to stop the treatment were some of the criteria used in determining duration in the administration of the dosage.

Although the full dose determination is varying from healer to healer, the dose given depends on age, physical strength and health conditions. The healers never administer treatments that are taken internally to pregnant women and equal amount of medicine should not be given for adults and children or for fat or thin cattle. Difficult application may happen rarely and to overcome the effect, milk and butter are recommended.

- e. Route of Administration:** - With regard to route of administration, medicine preparations of the study area were either taken internally (61.94%) of which an oral application is a leading route, nasal, ear, eye and anal. Or applied externally (38.06%) of which rubbing washing, putting, smoking and brushing are included.

Some of the application modes of traditional medicine have spiritual values in the area. By this, medicinal plants, for example ambelta and afanfartu are crushed together and sprayed early in the mornings and evenings around animal cages, in house and on utensils. This act is believed to keep away or remove evil or bad spirits that for example, could make the cows uncontrolled and dislike their young, to prevent lightning and noise from the house and animal cage.

The other spiritual value is associated with having a piece of root or bark of medicinal plants, for example botoroo in pocket or as the tooth brush, is believed to prevent a person from evil eye and man-made poison. Some of the respondents reported that, restrictions are obligatory when patients take certain types of remedies; for example, a patient who takes remedy against tapeworm should not take any food item six hours before and after the administration of the medicine. Similarly, a patient who takes remedy against rabies and hookworms strictly hides from shadow of humans and other animals; particularly cock and male dog for a day after medication.

**Effectiveness of traditional medicine:** - Respondents reported that, there are medicinal plants which are very effective in treating certain diseases; for example, from rabies, liver and health problems associated with spider poison and bat urine; even patients prefer to visit local healers (traditional medicine) than modern medicine or use traditional medicine after failure of modern drug.

#### **4.1.3.2. Dhidhiibbaa (physio-therapy) treatment**

According to the respondents, physio-therapy is one of the health problems that could be practiced by traditional healthcare practitioners' in the study area. Such health problems are two types, namely: meelu (muscles spasm) and caba (bone fracture or dislocation of two bones on the circumference) and treated indifferently. For example; the muscle spasm could be treated by washing hot water, pounded it and should be tied by cloth; whereas, bone fracture could be treated by using plants locally called "shambaqqoo" tied with cloth as support. These two health problems are treated early in the morning before doing any another work by messaging with butter and/or any cosmetics (if butter is not available). After that, the injured body part should be pounded and attached together and tied with cloth and shambaqqoo for 3-5 days. That healer would also advices and/or recommends patients what they should eat and drink up to the end. As the data showed, either it is broken body part or muscle spasm; he/she drink hot drinks like mooqa aja (oat soup); which is the most recommended drinks for such kind of health problems. From foods, anchote is the most useful food for such kind of health problem. Anchote is a plant which is grown at the garden and the bulb of the anchote is prepared in the form of wet and eats with enjera for meal purpose and mostly used for treatment of bone fracture.

#### **4.1.3.3. IK of traditional healthcare practices known to many people**

According to the study result represents, among the three IK of traditional healthcare practices, giving physiotherapy treatment (either muscle spasm or broken down of body part) is common for all peoples of the community members regardless of sex, age, cultural background and economic factors. This kind of traditional healthcare could be thought, shown and told to the community even to the patients with and/or without fees, no secrecy behind this traditional healthcare. But, according to the respondents' point of view, even if it is common and known to all community members and everybody can treat it, everybody can't give healthy for that infected body part; as a result of such kind of IK of traditional healthcare is via inheritance. This is meant that, such kind of IK of traditional healthcare practices works only if transferred from father to son or generally in-between relatives. The one that surprised the researcher during group discussion is, even if they are brothers and for example the same in father and different in mother, the one whose mother is different from the other could not treat equally with them.

Concerning IK of traditional healthcare practices that did not known and common to many people, traditional medicine practice have been not known and common to many people as a result of threat that practitioners (knowee) have incase of cultural beliefs and traditions and other factors related to knower (who want to know). For instance, the healers never show the plant or disclose the name of the medicinal plant to their patients; as a result of belief that if the patient knows the medicinal plant, the medicine becomes power less in curing the patient. Most of practitioners' uses traditional medicine as a source of income. There is a belief that if many people know all information about traditional medicine and if they told to somebody else, their income might be low. In most cases, the elders train their family members about the medicinal plant knowledge and skill in their later ages. At this age, they may be too old to travel to the field to do practical teaching. A person trained by his family performs a strong oath (Locally, kaku) to keep confidentially all the knowledge he obtained on medicinal plants and traditional medicine. Although, some people know the medicinal plants and the methods to prepare the medicine, they do not exercise the knowledge. This is because they have not received blessing by well known elder or as he/she was not from blessed family.

#### **4.1.3.4. Documenting IK of traditional healthcare practices**

To group discussion, IK of traditional healthcare practices did not documented yet and transferred orally (by word of mouth) from father to son, mother to daughter and generation to generation. As respondents, this discussion is the new and the first one with them and any other governmental bodies like Health Bureau and different NGOs did not collect from them to document such kind of knowledge.

#### **4.1.3.5. The uses of traditional healthcare practices**

On group discussion, the question of whether the use of traditional healthcare varies because of economic status, social and cultural background and any other factor or not was raised. According to respondents, every economic group (whether they are poor or rich), every social group, every community who have different cultural background and religion group use traditional healthcare. But, the only difference on some of traditional healthcare is, the difference of fees. For instance, according to traditional healers of liver disease said, those patients who came from away (far from the local) pays additional fees. This is not because of social and cultural background rather by understanding that, he/she beliefs with this medicine as it cures liver disease and came from far. However, this kind of medicine could not be given freely; because if it is given freely, according to traditional beliefs, it cannot cure the patient from disease. Even if he/she is his/her son or daughter, he/she should give “grass” for the healers. From cultural perspectives, if the patient is the healers’ children, because of the money is from the same home, the children gave the grass in place of the money.

#### **4.1.3.6. The trend of usage of IK of traditional healthcare practices and impacts of some new developments**

As the collected data indicated, the use of IK of traditional healthcare practices has decreases in time and space because of the social and infrastructural development factors such as health facility, road and transport, newly introduced religion and formal education.

**i. Social and infrastructural development factors (access to health facility, road and transport).**

As revealed by respondents, there have been remarkable changes in infrastructural development such as access to health facilities, transportation and mass media, telecommunication and market centers in most parts of Horro Guduru Wollega zone. One of the changes observed since recent time is the expansion of modern medical centers and health extension services in every corner of the zone. The utilization of locally available medicinal plants to cure various human and livestock disease is an old age practices among the community of the zone's. One of the key informants residing in Beda Worke kebele revealed the following regarding the importance of medicinal plants for human and animal alignment and the change occurred since recent time.

“I never went to health station in my life. Whenever I feel discomfort like headache or stomachache, I usually take a piece of leaf of plants. We have local medicine for all kind of diseases such as malaria, diarrhea, influenza, skin related diseases, toothache, headache, persistent cough and others. In the past, nobody go to health center as it was inaccessible. However, today we get medicinal center at small distance from our residences, health center in our locality and health extension worker who give us treatment when people are sick.”

From this, nowadays, the local people prefer to visit health extension workers, even for simple pain like headache, instead of utilizing the local medicine available at their disposal. Consequently, the possibility to communicate knowledge and skills about the use of locally available medicinal plants to the successive generation seems to be moving back because of heavy dependence on modern medication.

The availability of road infrastructure also contributes towards the gradual loss of IK by the frequent visit of the local people in the remotest place to nearby urban centers when they feel sick. The following quote is an indication concerning the changes noticed with regard to transportation services by one of Dile kolba kebele resident:

“Five years ago, there was no any means of transportation; except, along all weather road connecting woreda towns to Shambu town. We have to travel four to five hours by foot to go to Wayu town. There is no means to take sick people to town other than human and animal back. Transportation is available only along the main road. Now, thanks to ambulance, it only takes 20-30 minutes to go to Wayu town.”

It is very common to see young people playing games, hearing spiritual songs, music and FM radio broadcasted from local and national broadcasting centers which attracts young people more to the lifestyle different from their own. Young generations spend their time after schooling watching movies, playing mobile games and watching television; in that, the introduced technology have changed them largely and have made them to give less credit to the local wisdom. The discussion reflected that, the young generation is showing quite different lifestyle as they are very much affected by what they call modernization. Generally, these all remarkable factors have an impact on the IK acquisition and transmission.

## **ii. The impacts of newly introduced religion**

The Oromo people of Horro Guduru Wollega zone have their own traditional belief systems; in that, they belief as there is only one God called *Waaqa (God)*. When the local people are in need of help from God, they often turn their face upward to the sky and saying ‘*yaa waaq*’ meaning “you God”. They usually give words of thanks to *Waaqa* via traditional leaders. Whenever disasters like intense sunshine, heavy rainfall, drought or epidemic diseases overcome, the people used to come together called by community elders to conduct mass prayer to *Waaqa*. One of the informants, who are member of *Gembo kebele*, said the following regarding the belief system in the community:

“We believe in *waaqa*. Our ancestors were powerful in bringing peace and health to the people. I remember once up on a time, rain was delayed from its actual time. The rain would have come in March; but, it remained until the end of May. The elders came out and conducted mass pray. Immediately a day after the mass prayer, it has rained. You can see how powerful the elders have in this regard.”

There is a belief among the community that ancestral spirits are the intermediaries and serves as a bridge between *Waaqa* and the people. There are also people who are regarded as saints locally known as *ayyaantu* or *waabeeko*. The *waabeeko* can predict the future events and provide an advice for those people who are in trouble with *Waaqa*; because they have a natural gift given for them even to predict the future life of peoples by seeing for example, the lees of the cup of coffee (locally *sini*) after he/she were drinks by it. The communities have also traditional belief system known as *ciincessa* (*aarsaa dhiyeessuu*), in which the people present petition to *Waaqa* together with gifts. A person who leads such kind of activity in one of the kebele states the following regarding the belief system:

“There are certain places, such as riversides, hillsides, or large trees, where individuals present their petitions to *Waaqa*. The people often present their petitions together with *ciincessa*, offerings presented to *Waaqa*; in that a piece of food and/or a mouthful of honey sprayed over the area comprise the *ciincessa*. In doing so, the people always refer to the *Waaqa* who created these beings (rivers, hills or trees). Most outsiders misunderstand this as a magic approach.”

As revealed by respondents, traditional belief systems were the base for everyday life of the society. The socio-cultural system in general is strongly tied to the traditional belief systems. Until the late 19<sup>th</sup>C, traditional belief system was the dominant that governs everyday life of the people; after a while, a new religion was introduced to the area by the settler. Following the introduction of new religion, most of the followers of traditional belief system were converted into Christian. Thus, it can be implied from the preceding discussion that the introduction of new religion in the area has detached the people from their social value and cultural elements and hinders children and young people from admiring and developing interest to know about their culture such as IK in healthcare and other aspect.

### **iii. The impacts of formal education on IK**

This study identified that, schooling has both positive and negative effects on usage of IK of traditional healthcare practices. The negative effect of the school is manifested in discouraging children and young people not to stay in their locality for relatively longer time and partly by infusing western based knowledge which in most case does not corresponds to the local wisdom. Obviously, what is being taught in school and what the family and community member are teaching seem different in most cases. On the other hand, the positive impact of education is

from the perspective of increasing the awareness of children and young people about environmental protection and conservation. Apart from this, the local people have developed the feeling that local wisdom and practices are not as such useful as knowledge and skills obtained from formal schooling. The local people seem to be ignorant of the fact that informal education (knowledge and skills obtained through contact made with local elders). Consequently, the local people appear to be indifferent to encourage their children to acquire IK and skills.

#### 4.1.4. Acquisition and transmission of IK of traditional healthcare practices

This section deals with the sources, the normative dimensions and setting in which and the mechanisms and paths by which IK of traditional healthcare practices acquired and transmitted.

##### 4.1.4.1. Sources of IK of traditional healthcare practices

The respondents were asked to mention sources of traditional healthcare practices of IK. On the acquisition of IK, table 4.7 presents that, the primary sources of IK of traditional healthcare practices were predominantly local, which included parents or family 19 (95%), neighbors and friends 17 (85%) and personal experience 16 (80%) and other social group gatherings like church/mosques 6 (30%) and demonstration and observation 14 (70%).

**Table: 4.7: Sources of IK of traditional healthcare practices**

S. No	Knowledge sources	Kebeles								Total	
		Dile kolba		Beda worke		Gembo		Mekanesa			
		No	%	No	%	No	%	No	%	No	%
1	Personal experience	3	15	5	25	4	20	4	20	16	80
2	Parent or family	5	25	4	20	5	25	5	25	19	95
3	Church/mosque	-	-	3	15	1	5	2	10	6	30
4	Neighbors	4	20	3	15	5	25	5	25	17	85
5	Demonstration and Observation	4	20	4	20	3	15	3	15	14	70
6	Total	16	80	19	95	18	90	19	95		

However, responses varied across the kebeles, the above table 4.7 shows that, personal experience was a major source of IK in Beda worke kebele 5 (25%), while parents were the main source of IK in Dile kolba, Gembo and Mekanesa kebeles which accounts 5 (25%) followed by



Beda worke kebele 4(20%). Church/ mosques is another main source of knowledge for Beda worke kebele 3 (15%) followed by Mekanesa 2 (10%) and Gembo 1(5%) kebele. Neighbors were the major sources of IK in Gembo and Mekanesa kebele 5 (25%) followed by Dile kolba 4 (20%) and Beda worke 3 (15%) kebele. Lastly, demonstration and observation were the source of IK of traditional healthcare practices for Dile kolba and Beda worke 4 (20%) kebele each followed by Gembo and Mekanesa 3 (15%) kebele each.

#### **4.1.4.2. Normative dimensions of IK of traditional healthcare practices acquisition and transmission**

In this context, the normative dimension of IK encompasses the socio-cultural practices and institutional setup and activities that guide everyday life of the society by setting customary rules and regulations on various societal matters for example on traditional healthcare practices.

Regarding normative dimensions for IK of traditional healthcare practices acquisition and transmission, all respondents 20 (100%) revealed that, Gadaa institution, Ya'i oda, sagada and ciinessa are the socio-cultural dimensions that play a great role in IK of traditional healthcare practices acquisition and transmission. A brief explanation of this link is presented in the subsequent sections.

**i. Gadaa institution:** - Gadaa system is a traditional social organization of the Oromo people, which communities of Horro Guduru Wollega also practices and this institution provides codes of conduct for the society in social, economic and cultural aspects. The institution usually passes rules and regulations with regard to communities' health, various social and cultural matters, organize the people whenever mobilization is needed. According to the administrative structure of gadaa system, the head of the institution is known as Aba gada. Most of the positions in gadaa system are not political; rather they are ritual, traditional and hereditary.

Aba gadaa provide the people with the only real sense of political unity they possessed, conducting rituals for the benefits of the entire society and trying to mediate in any conflict among the clans. One of the principal roles of gadaa system is to keep the integrity of the culture through conducting different cultural activities, maintaining stability among the people by keeping customary rules and regulations, protecting the peoples from external worriers, mobilizing and conducting various ritual practices like mass prayer whenever there are natural calamities. Elderly people conduct the majority of the activities under gadaa

system and other indigenous institutions. In this regard, elders have a big place, respect and extensive power to lead ya'i oda and conduct ritual ceremonies such as ciincessa and sagada/kadhata among the people.

- ii. **Ya'i oda institution:** - As mentioned earlier, ya'i oda is a traditional institution in which the Horro Guduru Wollega elders locally known as "*ayyaantu* or *waabeeko*" gathered at ya'i oda place through their ya'i oda leaders and conduct ritual activities and discussed on various societal matters in seeks of peace and security, timely rain, diseases free environment. As beliefs, ayyaantu or waabeeko are the intermediary between human being and Waaqa and acts as the will of Waaqa. According to the oral tradition, ya'i oda is ritual sacred place. No one cuts and allows his animals to graze rather than giving value for the place and the local people communicate with Waaqa. In the past, before the introduction of new religion to the area, the local people use to communicate with "Waaqa" through their ya'i oda leaders or ayyaantu. There is a strong belief that any sort of disaster be natural, such as drought or disease are resolved through prayer made by the traditional leaders to Waaqa.

Whenever there is a problem, ya'i oda leaders make call to the people through a messenger to gather at ya'i oda place for mass prayer. Then every member of the society, irrespective of age, sex and societal status is gathered at ya'i oda and conducts prayer guided by elders. Such massive praying system is known as "sagada". Everyone who comes to conduct sagada holds a leaf of an indigenous tree known as birbirsa, and sings a traditional song following their elders.

- iii. **Sagada:** - The study communities have a cultural practice known as sagada in which local elders, young people and children gathered for massive prayer whenever there is a natural calamity. When the people encounter problems such as drought, epidemic disease, loss of crop production, and others they call peoples through elders known as ergamtu (messenger). Then the people gather and sing traditional song guided by elders. Everybody holds a leaf of or a branch of tree known as birbirsa and using other tree species for this purpose is prohibited.

iv. **Ciincessa:** -It is a traditional belief system through which elderly people in Horro Guduru present gifts and petition to *Waaqa*. It is a traditional practice conducted by elders whenever newly married bridegroom (a newly married man) is not able to conceive a baby. Whenever there are natural calamities, elders used to meet and present their request to *Waaqa* through presenting domestic animals such as sheep.

#### **4.1.4.3. Settings in which IK of traditional healthcare practices acquired and transmitted**

IK of traditional healthcare practices of the study community is not taught in formal school or other setting away from its natural settings. IK and skills related to traditional healthcare system in study community is acquired through making contact with the natural environment (biophysical settings) and through socialization processes (socio-cultural settings).

The biophysical setting is the principal learning media and practical laboratory where peoples can practice experiments and learn from their day-to-day interaction with the environment. In this regard, the experiences of the elders are a valid testimony as they have matured knowledge and skills about every aspect of the traditional healthcare practice despite of lack of formal education and any essential training.

Likewise, Indigenous institutions (*gadaa system* and *ya'i oda*), sacred places, homesteads and places where cultural events such as wedding are the principal socio-cultural setting in which IK is acquired and transmitted. The socio-cultural settings are an ideal learning environment. Besides, the dialogue and conversation conducted between elders and a child at home in the late evening time is an appropriate leaning environment.

#### **4.1.4.4. Mechanisms and paths of IK of healthcare transmission and acquisition**

In this study, four mechanisms of IK transmission such as transmission from parents and grandparents to children which is equivalent to vertical transmission, from non-parental social group, mainly community elders to children (oblique transmission), knowledge and skills transmission among the peer groups (horizontal transmission) and knowledge and skills acquired from once own experience and school were identified. The group discussion result revealed that, more than 95% of the respondents said as IK of traditional healthcare practices acquired from parents and it represents as parents play a principal role in the transmission of IK related to traditional healthcare practices.

#### 4.1.4.5. Proposed IK of traditional healthcare practices acquisition framework

This section is aimed to develop the IK of traditional healthcare practices acquisition and transmission framework. The sources of IK of traditional healthcare practices of Horro Guduru Wollega zone is mostly parents. It is acquired and transmitted orally by using folklore activities in bio-physical and socio-cultural settings and in different normative dimensions. However, the use of IK of traditional healthcare practices has decreases in time and space because of the social and infrastructural development factors such as health facility, road and transport, newly introduced religion and formal education and these factors affects local communities and other interested peoples to acquire IK from local communities. Most of the time peoples confuses with the how of the acquisition of IK from the local community either to save IK from loss by practicing or capture or document it. So, the framework has brought relevant issues in to consideration, shapes and tells the starting and ending point in the acquisition of IK in traditional healthcare practices of Horro Guduru Wollega zone as depicted in Figure 4.1.

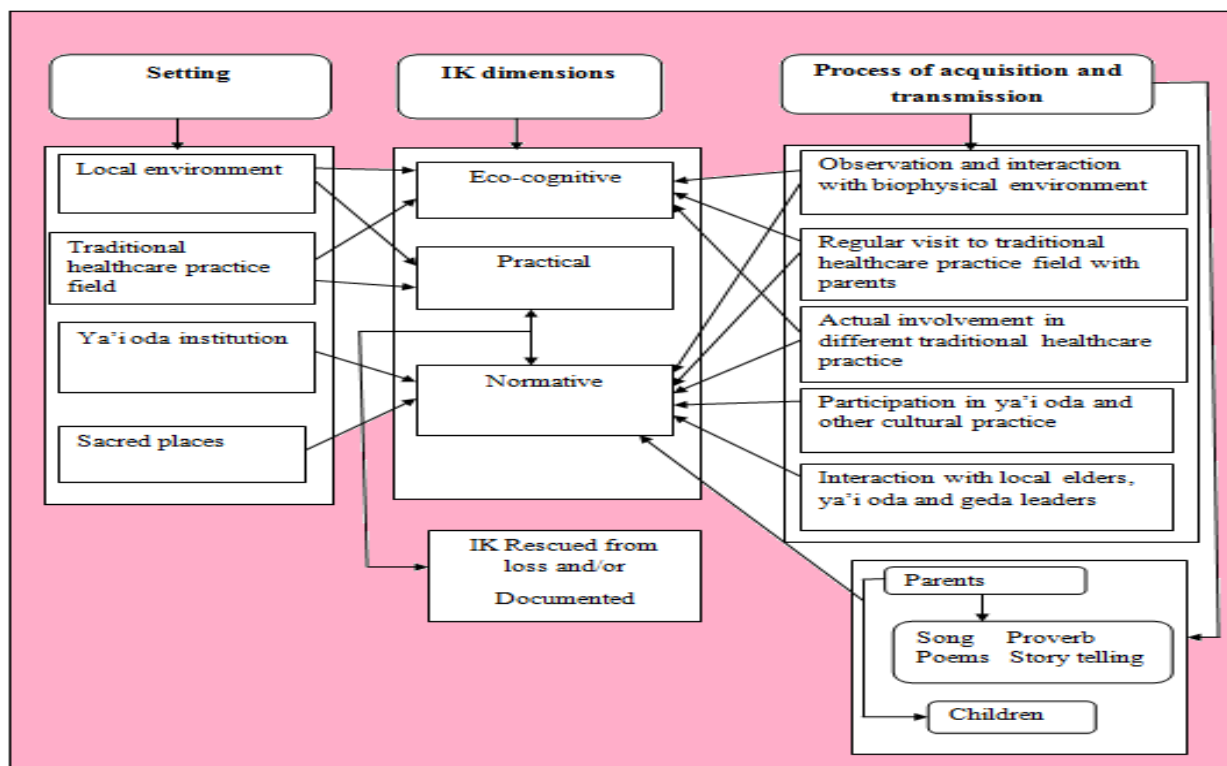


Figure 4.1: Proposed IK of traditional healthcare practices acquisition framework

As it is shown on the figure 4.1, the framework is developed based on Berkes' (2008) knowledge-practice-belief analysis and traditional learning sequence by Ohmagari and Berkes (1997). The framework starts from left to right. Because of IK of traditional healthcare practices of Horro Guduru Wollega zone is not thought in formal school, IK of traditional healthcare practices in the zone is acquired through the contact made with natural environment (bio-physical setting) and through socialization process (socio-cultural setting). To do that, there is a need to contact with local environment and practical field which are principal learning media and local laboratory for the community. On the next, there is a relationship with socio-cultural setting such as indigenous institutions (ya'i oda and Gadaa system), sacred places, homesteads and places where cultural events such as wedding are conducted and they are source of IK of traditional healthcare practices. Acquisition of IK, particularly, regarding cultural values and norms, belief systems, rituals, customary laws therefore demands active participation of the learners in ya'i oda and gadaa system meetings and different traditional festivals conducted at sacred places.

Knowledge-practice-belief complex designed by Berkes (2008) is used to characterize IK of traditional healthcare practices of Horro Guduru Wollega zone. According to him, four levels of IK analysis are identified: local knowledge of plant and animal, plant and resource management system, social institutions and world views. The four levels are grouped in to three: the eco-cognitive IK dimension, practical dimension and normative dimension.

Eco-cognitive dimension mainly focuses on the major components such as dominant plants, animals, soils and climate used for doing IK of traditional healthcare related activities such as traditional medicine preparation, physio-therapy treatment and spiritual treatment. Practical dimension is attempted to explore the production process, resource management system, an appropriate set of practices, tools and techniques regarding traditional healthcare practice. There are multitudes of healthcare practices that characterize the traditional healthcare practices of Horro Guduru Wollega zone such as traditional medicine practice, physiotherapy practice and spiritually therapy practice. These practices could be done by encompassing socio-cultural practices and institutional setup and activities that guide everyday life of the society by setting customary rules and regulations on various societal matters.

The process of acquisition and transmission of IK seems to correspond to the traditional learning sequence model adopted by Ohmagari and Berkes (1997). As the data from the local community revealed, the traditional learning sequence of Horro Guduru Wollega zone communities support the Ohmagari and Berkes (1997) traditional learning sequence. So, in order to acquire IK of traditional healthcare practices, young generations should begin with observation and familiarization tasks done by their parents, local elders, after that, they should be motivated to do what their parents and local elders do. To Singh (2005), acquisition and transmission of IK also occurs through family lines from parents and grandparents telling narratives, including stories, songs and poems formally either at social occasions or informally between family members late into the night. Generally, the use of this framework is to acquire and practice IK of traditional healthcare related activities of normative using knowledge gained through Ohmagari and Berkes' traditional learning sequence model and family lines based in order to rescued IK from loss or document it.

#### **4.1.5. Sharing of IK of traditional healthcare practices**

This section comprises about why IK is shared, factors prohibit IK from shared, the indigenous mechanisms used to sharing IK and IK sharing flow mechanisms in the study area.

##### **4.1.5.1. Purpose of sharing IK of traditional healthcare**

Regarding why IK of traditional healthcare practices shared in the communities, respondents revealed that, sharing of IK within and across communities can enhance cross-cultural understanding, helps to get the right information at the right time from the right person at the right place. Thus, sharing of IK of traditional healthcare practices makes the community knowledgeable about IK of traditional healthcare practices; in that, peoples can understand about how to identify disease and its' main cause, how and by what to treat the disease, and understand the importance of those things used for treatment in the environment. However, according to the data from group discussion, IK of traditional healthcare practices did not fully shared; because of the following factors.

Socio-cultural factor; according to the respondents, knowledge on animal and human traditional medicines is inherited in the clan or family only, so very few people know about them due to customs or taboos in the clan. Poor knowledge sharing culture is another factor; in that, little cooperation from knowledgeable people limited access to knowledge. Most respondents reported

as they did not have a knowledge sharing culture and no one encourages them to do so. Elders are not aware or not giving attention to sharing as the saying that “each times an elder dies; it is as if a library had burned down” and if they didn’t share their knowledge as it burned down; which represents lack of awareness. Resistant to change is the other factor that implies; some new generations were resistant to adopt new knowledge from their community due to lack of interest they have and encouragement from their community. For example, in Beda Worke kebele, some respondents indicated that, they were not willing to learn from their family because they preferred their personal experiences what they learnt from school and they count IK of traditional healthcare as backwardness. Some people were selfish about sharing their knowledge, which limited other people in seeking knowledge by the belief that others would beneficiary if they shared their knowledge; which is called knowledge hoarding.

To overcome the above barriers, creating the right conditions for IK sharing such as traditional culture and customs, trust or being honest to the shared knowledge; creating good socio-cultural input and status that indicates the sharing of IK in case of wealthy, politically well placed and knowledgeable people and context and space that indicates to know for why, how and where to share IK.

#### **4.1.5.2. Indigenous practices for sharing IK of traditional healthcare practices**

The findings showed that, there were no pre-defined structures and instruments in the surveyed communities to enable knowledge sharing. The IK is commonly shared among individuals and within the communities through events such as folklore activities. The respondents were asked to provide details on methods that were important in sharing IK in their communities, which included folklore practices. This section required to establish the role of folklore in sharing IK of traditional healthcare practices. The respondents were asked to describe types of folklore performed in their communities, occasions on which the folklore were performed, the purpose of performing those aspects of folklore, the attendance at these activities relating to folklore and the performers who presented the folklore activities.

### a. Types of folklore

When asked to indicate if activities in relation to folklore were practiced in their communities, 20 (100%) respondents replied affirmatively that folklore activities were still practiced. They were asked to state kinds of folklore that were practiced in their communities. Accordingly, storytelling is the major form of folklore practiced across the kebeles, with a score of 16 (80%) respondents. Other forms of folklore were proverbs 11 (55%), poetry 10(50%), song 7 (35%), drama 4 (20%), plays 4 (20%), debates 3 (15%), and dance 2 (10%); (Table 4.8).

**Table: 4.8: Types of folklore practices in study area to share IK of healthcare**

S. No	Types of folklore	Kebeles								Total	
		Dile kolba		Beda worke		Gembo		Mekanesa			
		No	%	No	%	No	%	No	%	No	%
1	Storytelling	5	25	3	15	4	20	4	20	16	80
2	Proverb	3	15	5	25	-	-	3	15	11	55
3	Poetry	5	25	3	15	2	10	-	-	10	50
4	Song	-	-	2	10	2	10	3	15	7	35
5	Drama	-	-	-	-	4	20	-	-	4	20
6	Play	-	-	-	-	-	-	4	20	4	20
7	Debates	3	15	-	-	-	-	-	-	3	15
8	Dance	-	-	2	10	-	-	-	-	2	10

As shown in the table above, there were a difference in practicing of folklore activities across the kebeles and in one kebele the community does practice two and more than two folklore. Story telling were the major folklore activities practiced in Dile Kolba 5 (25%), Gembo 4 (20%), Mekanesa kebele 4 (20%) and Bada Worke kebele 3 (15%). proverb was mainly practiced in Bada worke 5 (25%), Mekanesa 3 (15%) and Dile Kolba 3(15%). Poetry was mainly in Dile Kolba 5 (25) and Bada worke kebeles with 3 (15%) and Gembo 2 (10%). Song was practiced in Mekanesa 3 (15%), Gembo 2 (10%) and Bada worke 2(10%). Other folklore activities such as drama, plays, debates and traditional dances with the score of Gembo 4 (20%), Mekanesa 4(20%), Dile Kolba 3(15%) and Bada worke 2 (10%) were practiced respectively.



## **b. The occasion of folklore activities**

The respondents were asked to indicate the occasion in which folklore was practiced. The respondents indicate that, various forms of folklore such as storytelling 12 (60%), proverb 9 (45%), poetry 8 (40%) and song 7 (35%) were practiced in the socio-cultural events such as on ya'i oda, wedding ceremonies, initiation rites during adolescence age, cultural ceremonies, funerals, entertainment and new born baby. Story-telling and poetry which accounts 11 (55%) and 10 (50%) respectively were practiced in the evening. Other types of folklore such as drama, plays, debate and dance were less performed at all occasions and during religious events.

## **c. The purpose of practicing folklore activities**

The respondents were asked to indicate the purpose of practicing folklore activities. Various forms of folklore such as songs, traditional dances, storytelling and proverbs were performed for social purposes, storytelling, proverb, poetry and songs were mainly performed for cultural, social, health and political issues; While, drama was mainly performed for cultural and political purposes. Folklore was practiced at a low rate for tourism and religion. The study findings showed that, despite the importance of folklore for cultural issues, they were significant for sharing traditional healthcare knowledge in the surveyed communities. For example, a proverb from Oromo ethnic group in Dile Kolba kebele shows how proverb was used to teach issues about health in the local communities. Some of the proverbs are:

**Fayyaan muka nyaata:** meaning “healthy man does everything”.

**Dhibbi abbaan hin beekne fayyaa dha:** meaning “a great wealth and gift is health”.

**Fayyaa tapha seetee qayyaan laga ceete:** meaning “health needs special care”.

From these local sayings, it is clear that health is considered as a great asset, and a life engine for any aspect of life activities in the area and the local community used these proverbs to motivate one another to keep their own health by any means; for instance by using their own IK.

## **d. Attending in the occasion**

An inquiry into whether everybody was allowed to attend folklore performances indicated that, almost everyone is allowed to attend there. There were few cases where the attendance to folklore activities was restricted to selected members of the communities. For instance, children were the major audience for storytelling across the kebeles. Certain types of folklore such as dances and

songs which were performed for socio-cultural issues such as weddings and initiation rites were restricted to invited people or elders across the surveyed kebeles. Despite the fact that the attendance at most of the folklore was not restricted, it emerged that the attendance to these folklore activities was very low due to ignorance and poor recognition of Mass Media and the advancements of technologies such as radio and television broadcasts which had replaced the traditional dances and storytelling.

#### e. Performing the activities

The respondents were asked to indicate if everybody was allowed to perform folklore in the communities and they indicated that, almost everybody was allowed to perform all types of folklore. There were special entertaining groups in surveyed communities which were used to perform songs, and traditional dances. Special entertaining groups were less used to perform drama and poetry. Further, elders mainly facilitated storytelling in the communities for historical, socio-cultural, health and political purpose.

#### 4.1.5.3. The flow mechanism of IK traditional healthcare practices

There are identical questions posed to determine the knowledge flow mechanisms and the responses of traditional healthcare practitioners' are summarized below in table 4.9.

**Table: 4.9: IK of traditional healthcare practices flow mechanisms in the local community**

S. No	IK of traditional healthcare practices sharing flow mechanisms	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
		No	%	No	%	No	%	No	%	No	%
1	IK is carefully accessed and used easily by local communities	-	-	4	20%	1	5%	12	60%	3	15%
2	There is a forum for knowledge sharing, like face to face (example, meeting)	-	-	5	25%	2	10%	9	45%	4	20%
3	IK is shared informally at individual level	3	15%	7	35%	1	5%	6	30%	3	15%
4	Everybody is interested to share IK	-	-	3	15%	-	-	13	65%	4	20%

5	Old and knowledgeable people in the community feels responsible to transfer/share IK	-	-	3	15%	1	5%	14	70%	2	10%
6	Younger generation is learning about IK from Elders	6	30%	7	35%	2	10%	3	15%	2	10%
7	No one is concerned to share IK	1	5%	9	45%	-	-	7	35%	3	15%
8	The impact of modernization/technology is high on sharing IK	2	10%	10	50%	3	15%	3	15%	2	10%

According to the above table, regarding the question of IK is carefully accessed and used easily by local communities, 4 (20%) of the respondents agreed, 12 (60%) disagreed and 3 (15%) of the respondents strongly disagreed. From this, it is possible to conclude that IK of traditional healthcare practices is not easily accessed by the peoples in local communities.

Respondents also asked whether there is a forum for IK of traditional healthcare practices sharing, like face to face (example, meeting). As it is depicted on the above table, 5 (25%) of them were agreed, 9 (45%) were disagreed and 4 (20%) of them were strongly disagreed. This indicated that, there is no formal forum of IK of traditional healthcare practices sharing in the local communities. The question of the IK is shared informally at individual level revealed that, 3 (15%) are strongly agreed, 7 (35%) agreed, 6 (30%) disagreed and 3 (15%) strongly disagreed. Responses from the respondents indicated that, IK of traditional healthcare practices is shared at individual level.

Regarding the question to everybody is interested to share IK in the local communities, 3 (15%) of the respondents were agreed, 13 (65%) of them were disagreed and 4 (20%) of them strongly disagreed. This implies that, most respondents did not confirm as everybody is interested to share IK of traditional healthcare practices in local communities. With the question of old and knowledgeable people in the community feels responsible to transfer/share IK, about 3 (15%) of the respondents were agreed, 14 (70%) of the respondents were disagreed and 4 (20%) of the respondents strongly disagreed. This indicated that, there are no old and knowledge people in the community who feels responsible to transfer/share IK of traditional healthcare practices.

On the subject of the younger generation is learning about IK from elders, about 3 (15%) of the respondents agreed, 14 (70%) of them were disagreed and 2 (10%) of respondents strongly disagreed with it. This indicates that younger generations were not learning about IK of traditional healthcare practices from elders. On the topic of no one is concerned to share IK, out of respondents, about 1 (5%) of respondents strongly agreed, 9 (45%) of them agreed, 7 (35%) of disagreed and 3 (15%) of the respondents strongly disagreed. From this information, it is easy to conclude that, most of the peoples are not concerned to share IK of traditional healthcare practices for their community. Concerning the impact of modernization/technology is high on sharing of IK, 2 (10%) of the respondents were strongly agreed, 10 (50%) agreed, 3 (15%) of them disagreed and 2 (10%) of the respondents were strongly disagreed. This shows that, the impact of modernization/technology is high on sharing of IK of traditional healthcare practices.

#### **Semi-structured interview result: data from community members**

In this section, the data obtained from the community members were analyzed and presented.

#### **4.1.6. Community members' perceptions and description of disease**

The respondents aged in-between 51-90 understood disease in terms of the human existential conditions as described by traditional healthcare practitioners. The other respondents described disease in terms of how they were feeling and the symptoms they observed on their bodies before taking any medication such as feeling weak, headache, diarrhea, body sores, cough and loss of appetite, difficulty in breathing, stomach pain, depression, flu and fever. The community members understand the causes of disease as traditional healthcare practitioners.

#### **4.1.7. Corrective and preventive care by self-medication and required from traditional healthcare practitioners**

This section identifies corrective and preventive care by self-medication and required from traditional healthcare practitioners.

##### **4.1.7.1. Corrective and preventive care by self-medication**

This section presents the summary of responses from community members to describe corrective and preventive care by home-made treatment.

## **Corrective care by self-medication**

In this study, self-medication refers to the respondents' knowledge of applying home-made treatment by using simple household products to cure naturally occurring diseases or symptoms of disease perceived and observed by the patient or by a family member. The respondents believed that, diseases classified as natural such as cough, flu, blotting, diarrhea, snakebites, fever, kin-tarot and faintness are always treated by self-medication by applying simple household products such as lemon, orange, salt, cooking oil, jinjibil (ginger), garlic and medicinal plants such as kusaaye, caatii, lafto and bakkanniisaa. When a family member treats a similar disease; another family member or the patient him/herself is able to apply the treatment that is required.

### **4.1.7.2. Indigenous mechanisms used to prevent disease: self medication**

Respondents provided a set of belief systems and practices specific to culture that have used as preventive functions by reducing health risks. Accordingly, promotion of health is achieved through cultural belief systems and practices such as cosmological factors, disease etiologies and isolation and cultural values such as culture, taboos and moral behaviors.

- a. Cosmological (natural environment) factors:** - In the indigenous cosmology of the study, good health is a balance between the natural environment and human society. Respondents understand elements including change in weather conditions that predisposes peoples to disease and having knowledge about seasonal changes in the weather conditions and about most common diseases that attack people during certain seasons is a helpful mechanism in minimizing chances to contract disease. The respondents' also aware plant species such as leaves of *gurgubbee* that cause disease like body wound. So, contact with this plant is avoided.
- b. Disease aetiologies:** - According to respondents, disease aetiologies such as ancestral spirits, witches and sorcerers, defilement and natural phenomena provide for a number of elements that are responsible for disease. Avoidance of disease is maintained through the offering of sacrifices to ones' ancestral spirits, protection of oneself against witchcraft and sorcery and observance of cultural taboos to avoid defilement.

- c. **Isolation:** - The respondents asserted that, certain diseases such as common cold, whooping cough, diarrhoea and scabies are contagious and therefore, in order to avoid transmitting to others, a person who got a contagious disease should be isolated from the community and limit contact with the rest of the family.
- d. **Culture:** - The respondents indicated that, indigenous mechanisms of preventive healthcare are learnt during enculturation (the process of educating children about cultural values). indigenous mechanisms of preventive healthcare such as behaviours, attitudes, beliefs and cultural values about the correct behaviour for preventing ill health is learnt through informal education in the households through observance of a sick member of the family, taking part in the healing rituals and through questions and folklore.
- e. **Taboo:** - It was observed that, particular cultural restrictions such as cultural prohibitions on sexual intercourse with (a menstruating woman, a woman who has just got miscarriage, widow) and avoidance of contact with polluting objects, people or places promote healthy living. Diseases such as persistent stomach pain, headache and swelling of the stomach resulting from failure to observe cultural restrictions are associated with ritual defilement.
- f. **Moral behaviour:** - The respondents said that, good behaviour ensures harmonious co-existence and better health; but, God or ancestral spirits punish the breaking of behavioural rules and taboos through disease such as misfortune, infertility, mental illness, physical deformity and unemployment and these are attributed to disrespect, disobedient, neglect and bad luck punishment. Conflicts and influence with neighbours and unfamiliar person are often avoided for fear of witchcraft and sorcery which might result in hatred and distrust, stressing situations and diseases such as mental illness and depression.

#### **4.1.7.3. Indigenous corrective and preventive care from traditional healthcare practitioners**

This section presents corrective and preventive care required from traditional healthcare practitioners by community members.

##### **Indigenous corrective care by traditional healthcare practitioners**

The following are indigenous corrective care provided by traditional healthcare practitioners in the study community.

- i. **Diagnosis:** - Of the community member interviewed, they all indicated that, traditional healthcare practitioners' corrective care usually starts with diagnosis about the cause of disease to know the medicines that should be administered for treatment. Thus, diagnosis of disease comprises a combination of procedures including prediction, observation, case history and evaluation of body symptoms to know the disease, its main cause and what treatment could be offered. Prediction was the principal method of diagnosis employed for ancestral intervention to guide the healer to provide information about the origin and nature of the disease and treatment thereof.
- ii. **Treatment:** - The respondents showed that, traditional healthcare practitioners cure diseases that attack all age groups and genders through medicinal plant parts, ritual and magical healing techniques. Ritual and magical healing is conducted to cleanse and strengthen the patients typically by a sacrificial animal i.e. (chicken, goat or sheep) is killed and particular parts such as hair, bones and skin are magically prepared to provide corrective care to the patient. Blood is used to cleanse ritual defilement and evil spirits. Medicinal plant parts are prepared and administered in different methods according to the type of diseases requiring treatment.
- iii. **Referrals:-** As respondents, traditional health practitioners showed flexibility in their healing practices; in that, they may refer their patients to any healthcare alternatives if the patients cannot show any improvement after receiving therapy and where the traditional healthcare practitioners are failing with their treatment.

### **Preventive care provided by traditional healthcare practitioners**

The respondents indicated that, attack by certain diseases could be prevented through the administration of indigenous healthcare practices prepared and prescribed by traditional healthcare practitioners only. As respondents, preventive cares provided by traditional healthcare practitioners are categorized as follows.

- a. **Protective amulet/charm:** - In most cases, protective is used to protect the personality of a person from disease to ensure good health and for protection against witchcraft and sorcery. Preventive medicine prepared from medicinal plant is usually in the form of powder or a small portion of the root. The powder is mixed with butter or Vaseline which is smeared on all body parts for preventive purpose or mixed with local drink called *areke* and taken

internally. The root of medicinal plant is used to protect people from evil spirit and it is carried in the pocket everywhere the person goes. The children are protected from the evil intentions of witches and evil power through magical charms. Several protective medicines known by the healers are prepared and wrapped into a piece of cloth which is sewn and put around the neck of a child or an adult for protection against attack by any disease.

- b. Sacrifice:** - It is held that periodically the head of the family organizes the performance of sacrifice usually made when assistance from ancestors is sought for protective purpose. During the ceremony, several magical herbs like *ulumaayii* are mixed together with the blood of a sacrificial animal (usually a goat and sheep). The purpose of the ritual is to strengthen the family members both physically and spiritually; so that, they can prevent any attack by disease and witchcraft attempts.

It was observed that, certain diseases like culture-bound syndromes (diseases of supernatural origin) do not require modern medicine and therefore, corrective care is through administration of traditional healthcare practices. By this, the above corrective and preventive cares, traditional healthcare practitioners treat and defenses all gender and age groups health problems. The treatment process involves either a full ritual with a sacrifice and herbal treatment. Treatment of culture-bound syndromes such as mental illness, curse, witches, and pain in body part, spirit possession, ritual defilement and epilepsy requires the offering of sacrifices and herbal treatment prescribed by traditional healthcare practitioners.

#### **4.1.7.4. Healthcare facilities available in the community**

According to data from local community showed, hospital, clinics, traditional healthcare practitioners and self-care or self-medication are the four different types of healthcare facilities available in the surveyed community. By this, respondents were asked to identify which healthcare facility they prefer for their healthcare. Accordingly, the largest number of respondents 15 (37.5%) prefer to consults clinics for their health care followed by those who seek medical care from traditional healthcare practitioners 12 (30%). Other respondents 8 (20%) prefer to consult with hospitals for their health care needs. Self-care is employed by fewer respondents that are 5 (12.5%). The largest number of respondents consulting in clinics was encountered in Beda Worke kebele community, followed by respondents in Gembo community. The largest number of respondents consulting with traditional healthcare practitioners was in Dile kolba and Mekanesa kebele community.



The respondents identified why they prefer those healthcare facilities. Accordingly, those respondents who prefer to consult clinics and hospitals were those who are near to health center and far from traditional healthcare practitioners, need to consult nurses and doctors to cure from diseases that can't be treated by traditional healthcare practitioners such as HIV AIDS, cancer, hypertension. Those respondents who prefer to consult traditional healthcare practitioners believed that, modern medicine improves the health conditions of the sick person, whereas; the indigenous medicine is required to eliminate the underlying cause of the disease and traditional healing practices for protective and remedial care are effective, accessible, affordable, acceptable and holistic.

#### **4.1.7.5. Consultation fee**

According to the interview result with community members, traditional healthcare practitioners consulted by patients more than four days in a week, any time during the day or night and who have full-time employment other than traditional healing are consulted only in the late afternoon and on weekends. Respondents showed that, traditional healthcare practitioners charge consulting fees either in cash or in kind; in that, the initial consulting fee is between 3 birr and 10 birr if at home of healers and 50 birr to 100 at market. Payment for treatment is mostly done at the patients have received treatment. They believe that, treatment could not be free; because, if it is given for free, the patient will not be cured from the disease. Even, if the patient is the member of the family, he/she gives a long grass for the healer. Payment is dependent upon the nature and complexity of the health condition, the type of medication and the period of medication prescribed for the patient. Community members indicated that the healers' services are affordable. The fee ranged between 3.00 birr and 100.00 birr based on the type of disease.

When they were asked as to whether the healers' fees are higher than what they could pay in clinics and hospitals, the community responded that, what is important is the type of corrective care offered by the practitioners. They also showed that, never mind the payment, the type of healthcare provided by traditional practitioners is valued more than money and the effectiveness of the therapies the healers dispense, encourages the patients to pay for the healthcare services offered.

#### 4.1.8. Barriers that hinder the management of IK of traditional healthcare practices

As KM is concerned with knowledge acquisition, sharing and preservation, barriers that come in the form of these activities might be the barriers for the effective management of knowledge. The study establishes barriers that hinder the acquisition, sharing and preservation of IK of traditional healthcare practices in the local communities.

##### 4.1.8.1. Barriers to acquisition of IK of traditional healthcare practices

Barriers to acquisition of IK of traditional healthcare practices are those which challenge the successfulness of acquisition and transmission of knowledge from sources to the destination in one or another ways. Table 4.10 shows barriers to acquisition of IK of traditional healthcare practices.

**Table: 4.10: Barriers that inhibit the acquisition of IK of traditional healthcare practices**

S. No	Problems associated with IK Acquisition	Kebeles								Total	
		Dile Kolba		Beda Worke		Gembo		Mekanesa			
		N	%	N	%	N	%	N	%	N	%
1	Poor knowledge sharing culture	6	15%	5	12.5%	7	17.5%	4	10%	22	55%
2	Lack of trusts	4	10%	3	7.5%	4	10%	8	20%	19	47.5%
3	Socio-economic factors	3	7.5%	3	7.5%	5	12.5%	6	15%	17	42.5%
4	Poor recognition of IK	7	17.5%	5	12.5%	8	20%	6	15%	26	65%
5	Resistance to change	8	20%	6	15%	7	17.5%	5	12.5%	26	65%
6	Lack of IK records	8	20%	4	10%	6	15%	7	17.5%	25	62.5%
7	Lack of appropriate IPR to govern IK	4	10%	3	7.5%	3	7.5%	5	12.5%	15	37.5%

An inquiry into the barriers that hinder the acquisition of traditional healthcare practices of IK indicated that, poor recognition of IK and resistance to change were the most cited barriers in the acquisition of IK in the communities, with a score of 26 (65%) each. Other major problems were lack of IK records 25 (62.5%), poor knowledge sharing culture 22 (55%), lack of trust 19 (47.5%), socio-economic factors 17 (42.5%) and lack of appropriate IPRs 15 (37.5%) were the major problems in acquiring of IK of traditional healthcare practices.

#### 4.1.8.2. Barriers that inhibit the sharing of IK of traditional healthcare practices

Table 4.11 shows barriers that affect the sharing of IK of traditional healthcare practices in the study area.

**Table: 4.11: Barriers that inhibit the sharing of IK of traditional healthcare**

s. No	Problems associated with IK sharing	Kebeles								Total	
		Dile Kolba		Beda worke		Gembo		Mekanesa			
		N	%	N	%	N	%	N	%	N	%
1	Poor knowledge sharing culture	6	15%	9	22.5%	7	17.5%	7	17.5%	29	72.5%
2	Lack of trusts	8	20%	6	15%	5	12.5%	7	17.5%	26	65%
3	Socio-economic factors	5	12.5%	4	10%	6	15%	3	7.5%	18	45%
4	Poor recognition of IK	9	22.5%	7	17.5%	7	17.5%	8	20%	31	77.5%
5	Resistance to change	6	17.5%	6	15%	4	10%	5	12.5%	21	52.5%
6	Lack of IK records	5	12.5%	5	12.5%	5	12.5%	5	12.5%	20	50%

An inquiry into the barriers that inhibit peoples from sharing IK of traditional healthcare practices indicated that, poor recognition of IK poor knowledge sharing culture were the most cited barriers accounting for 31 (77.5%) and 29 (72.5%) respectively. Other major barriers were lack of trust 26 (65%), resistance to change 21 (52.5%), lack of IK records 20 (50%), and social-economic status 18 (45%). Selfishness, occurrence of conflicts within families, use of conventional technologies undermined the sharing and use of indigenous techniques, traditional structures, customs and taboos, some IK holders required to be paid in order to share their knowledge and illiteracy are also the barriers to share IK of traditional healthcare practices .

#### 4.1.8.3. Barriers that hinder the preservation of IK of traditional healthcare practices

The main goal of knowledge acquisition and sharing is to protect knowledge from lost for new generations. However, in this knowledge protection, there might be factors that affect the knowledge preservation for generations. The table 4.12 reveals the barriers to IK of traditional healthcare practices preservation in the study area.

**Table: 4.12: Barriers that hinder the preservation of IK of traditional healthcare**

s. No	Problems associated with IK preservation	Kebeles								Total	
		Dile Kolba		Beda worke		Gembo		Mekanesa			
		N	%	N	%	N	%	N	%	N	%
1	Poor knowledge sharing culture	5	12.5%	4	10%	6	15%	3	7.5%	28	70%
2	Lack of trusts	7	17.5%	6	15%	5	12.5%	7	17.5%	25	62.5%
3	Lack of effort to preserve IK	7	17.5%	6	15%	9	22.5%	7	17.5%	29	72.5%
4	Poor recognition of IK	9	22.5%	8	17.5%	7	17.5%	8	20%	32	80%
5	Social status	6	17.5%	5	12.5%	7	17.5%	5	12.5%	23	57.5%
6	Exclusion of IK in the formal education	5	12.5%	5	12.5%	4	10%	5	12.5%	19	47.5%

When asked to indicate if they faced any problems in the preservation of traditional healthcare practices IK, poor recognition of IK 32 (80%), lack of efforts to preserve IK 29 (72.5%), poor knowledge sharing culture 28 (70%), lack of trust 25 (62.5%), social status 23 (57.5%) and problem of exclusion of IK in the formal education system 19 (47.5%).

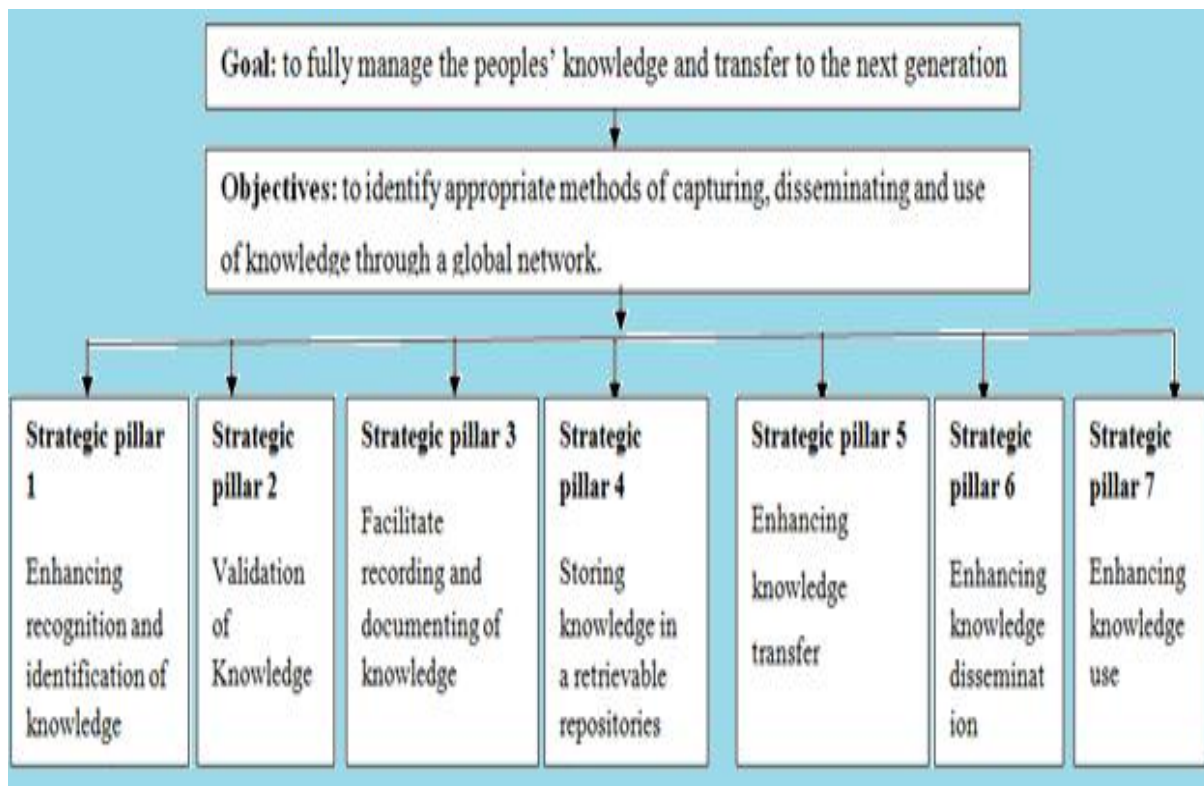
#### **4.1.8.4. IK of traditional healthcare practices management strategy**

This section presents IK of traditional healthcare practices management strategy for rural community and to recommend IK management strategy for effective managements of IK of traditional healthcare practices. As KM is concerned with knowledge acquisition, sharing and preservation, barriers that come in the form of these activities might be the barriers for the effective management of knowledge. Accordingly, poor knowledge sharing culture, lack of trusts, lack of effort to preserve IK, poor recognition of IK, social status, exclusion of IK in the formal education, socio-economic factors, resistance to change, lack of IK records, lack of standard IK management strategy and lack of appropriate IPR to govern IK are the barriers that makes IK of the study area as not to be managed effectively. By this, the IK of traditional healthcare practices of the study community is not captured, managed, preserved, disseminated and used through a global network and still in the minds' of the individuals. So, the IK of traditional healthcare practices management strategy will make IK a key deliverable by which rural community can improve its effectiveness in achieving its effective management of IK of traditional healthcare practices.

#### 4.1.8.4.1. Goal of IK of traditional healthcare practices management strategy

IK of traditional healthcare practices management strategy is aimed to fully manage the IK of traditional healthcare practices that is found in the mind of people and transfers to the next generations.

The more specific objectives of those strategies are to assist the knowledge recognition and identification, validation, recording and documentation, storage in retrievable repositories, transfer, dissemination and use knowledge through storytelling, face to face and printed materials. The achievement of the overall goal and specific objective is supported by seven strategic pillars: enhancing knowledge recognition and identification of knowledge, assessing the significance of knowledge, facilitate recording and documenting of knowledge, storing knowledge in a retrievable repositories, enhancing knowledge transfer, enhancing knowledge dissemination and enabling knowledge use.



**Figure 4.2: Approach to develop traditional healthcare practices of IK management strategy (World Bank, 1998)**

The rural communities' IK of traditional healthcare practices management strategy action plan comprises repetitive, phased approach designed to provide opportunities and enable the strategy to evolve through the communities using new approaches. The four phases are designed to IK of traditional healthcare practices management strategy which begins in 2016 and ended in 2020 (2016-2020). Within this repetitive approach, the main recommended actions focus on the seven strategic pillars.

#### **4.1.8.4.2. The seven strategic pillars of IK of traditional healthcare management strategy**

##### **Strategic pillar 1: Enhancing recognition and identification of knowledge**

Some IK of traditional healthcare practices may be embedded in a mix of technologies or in cultural values, representation them unrecognizable at first look to the external observer (technical and social analyses; therefore, be required to identify IK of traditional healthcare practices). People in the communities have not identified and had poor recognition of IK of traditional healthcare practices and identification strategy. So, local leaders, researchers, NGO and government should participate on it.

##### **Strategic pillar 2: Validation of knowledge**

This involves an assessment of IK of traditional healthcare practices significance and relevance (to solving problems), reliability (i.e., not being an accidental occurrence), functionality (how well does it work), effectiveness and transferability. Therefore, those peoples who are participated in strategic pillar one (local leaders, researchers and NGOs' and governmental organization should identify the validity of knowledge in local community.

##### **Strategic pillar 3: Facilitate recording and documentation of knowledge**

Recording IK of traditional healthcare practices and its documentation is a major challenge because of the tacit nature of IK of traditional healthcare practices (it is typically exchanged through personal communication from knowledgeable to knowledge finder, from parent to child, and the absence of capturing strategy in local community). In some cases, modern tools could be used, while in other circumstances it may be appropriate to rely on more traditional methods (e.g. taped narration, drawings).

#### **Strategic pillar 4: Storing knowledge in retrievable repositories**

Storage is not limited to text document or electronic format; it could include tapes, films and storytelling and gene banks. Those researchers or any responsible person who capture knowledge from local area should store it in a data base where one can easily retrieve.

#### **Strategic pillar 5: Enhancing knowledge transfer**

This step goes beyond merely conveying the knowledge to the recipient; it also includes the testing of the knowledge in the new environment. Channels are the most appropriate approach in this step. Local leaders should provide conducive environment for knowledge transfer from the source to the recipient.

#### **Strategic pillar 6: Enhancing knowledge dissemination**

Dissemination to a wider community adds the developmental dimension to the exchange of knowledge and could promote a wider and deeper flow impact of the knowledge transfer. The awareness, channel applications and mainstreaming are necessary steps required for a successful integration of IK of traditional healthcare practices into the development process which could help in managing IK of traditional healthcare practices. Libraries and higher education institutions need to play a role in collecting, preserving, harnessing and disseminating IK of traditional healthcare practices for sustainable development.

#### **Strategic pillar 7: Enabling knowledge use**

This pillar is aimed at building knowledge capacities and fully realizes community's potential. The full implementation of the activities of all above pillars requires a level of capacity within communities that possessed only by elders and is in need of development.

The action plan will be implemented on seven pillars that will progressively linking the KM strategy in the practices, communities, higher education institutions and libraries and to benefit from the strategy and responsiveness in the face of likely ongoing change in the communities environment.

#### **4.1.8.4.3. Phases of IK management strategy into action**

The rural communities' IK of traditional healthcare practices management strategy action plan comprises four phases as follows:

##### **Phase one**

With duration of about two years, phase one is aimed at enhancing recognition and identification, validating, facilitates recording and documenting of IK of traditional healthcare practices from the local communities through activities that can be undertaken (strategic pillar 1, 2, and 3). The focus is mostly on achievable at the level of the rural communities; leaders could create conditions for the effective implementation of phase one. So that:

1. Leaders, health officers should identify the IK of traditional healthcare practices holders
2. Identifying and testing instruments for capturing IK of traditional healthcare practices
3. Leaders could create conducive environment for the researchers, health and agricultural officers and others who could capture IK of traditional healthcare practices from the holders.
4. Additional process-related to barriers of IK of traditional healthcare practices to improving /facilitate IK of traditional healthcare capturing (if any) is identified.

Two issues should be examined with a view to improving relationship between rural communities and stakeholders; establishing committees from local communities and the expert from knowledge management officers and aligning the committees of the communities. After all, the researchers, health officers, agricultural officers and others participants could capture IK of traditional healthcare from the IK of traditional healthcare holders/elders.

##### **Phase Two**

The second phase of the IK of traditional healthcare management strategy of rural communities' action plan/work plan is predicted as one year and half process that will begins to codify IK to store it in a retrievable storage media, to transfer to the other and disseminate (strategic pillar 4, 5, and 6). It involves the following sets of activities:

1. Developing a database, sources, lessons learned and partners
2. Publishing selected cases in print and electronic format.
3. Identifying appropriate methods of disseminating among communities;
4. Facilitating a global network to exchange IK of traditional healthcare practices.



The phase two IK of traditional healthcare practices management strategy must build on higher education institution, researchers, health and agricultural officers.

### **Phase Three**

The third phase of action plan is predicted as about one year. The specific goals and activities of phase three will be enhancing IK of traditional healthcare practices use through applying IK in the development process and building partnership. Phase three involves the following activities:

1. Raising awareness of the importance of IK of traditional healthcare among development partners;
2. Helping countries to prepare national policies in support of indigenous practices;
3. Integrating indigenous practices in programs/projects supported by partners.
4. Learning from local communities and NGOs;
5. Influence limited resources of partners to obtain greater impact on the IK of traditional healthcare;
6. Addressing the IPR issue of IK of traditional healthcare practices.
7. Management of IK of traditional healthcare practices is extremely important; because, whenever bearer's of this knowledge die, they will die with all the information, knowledge and wisdom, which could have been saved and passed on to others.
8. Education and awareness is essential contributors for the management of IK of traditional healthcare practices.

### **Phase four**

The fourth phase of action plan is predicted as about one year and six month. In this phase, through the support of phase one, phase two and phase three, generate IK of traditional healthcare practices management strategy for the period of 2016–2020. The stakeholders should do specific activities of which will provide many opportunities and enable them to use the knowledge. In general, the IK of traditional healthcare practices management strategy should focuses on facilitating capturing, collaborative learning.

#### **4.1.9. IK of traditional healthcare practices: data from stakeholders**

Similar interview questions were held with three stakeholders including Health bureau, Agricultural bureau and NGO.

By the question whether stakeholders aware peoples who possess traditional healthcare practices or not, the majority of the respondents 16 (66.7%) responded as they were aware peoples in the local community who possessed IK of traditional healthcare practices. Those, 8 (33.3%) were not aware peoples who possessed IK of traditional healthcare practices in the surveyed community. When asked to show their acceptance by community members, most of the respondents, 15 (62.5%) respond that, local community accept them as healers in the community; whereas 9 (37.5%) revealed that, most of the communities accept people who possess or practice traditional healthcare as witchcrafts. In this case, traditional healthcare practitioners are named by the disease they cured; for instance, “beekaa dhukkuba saree” means healers of rabies; “beekaa dhukkuba tiruu” means healers of liver disease; which hesitate them on their work. So, from this interview result, traditional healthcare providers are considered as healers of the disease.

By the value of IK adds to traditional healthcare practice, 15 (62.5%) of them responded that, having healthcare knowledge is used to keep people healthy. Many local people treat themselves and others locally by using their own knowledge. So, in community, on keeping of communities' health, IK plays a great role. Whereas, 9 (37.5%) revealed that, IK of traditional healthcare practices play role not only in keeping healthy of people; but also, bring disease to people. For instance peoples who possess witchcrafts by using their own IK.

Regarding the relationship between the practice and the socio-cultural values, meaning and wellbeing of the community, according to the views of the respondents, traditional healthcare practice is a culture based treatment, treatment that focused on the interest of the community. As a result of this, due to practitioners offer treatment of cultural based, they have acceptance from the community. So, the practice have good significance or meaning for the community. In case of the wellbeing of the practice for the community; because, they treat culturally, it has good wellbeing for the community.

Despite of the known's of the practice to the community, half of; 12 (50%) of the respondents believed that, some of the practice like traditional physiotherapy and some knowledge of traditional medicine practice like the medicine preparation might be common for the community.

Others, 12 (50%) of the respondents revealed that, the practice is not common for all members of the community rather for the specialist. Those respondents (who said not well known for all community members) said that, most of the people see the knowledge as power, there is lack of knowledge sharing culture and most of the people believe that, IK of healthcare as inheritance and they do not want to teach others. Because of that, the IK of the traditional healthcare practices is specified on the hands of few peoples.

In the face of how IK of traditional healthcare practices transmitted among the community, IK of traditional healthcare practices transmitted in-between family, among individuals, among generations orally. Respondents said that, there are no written documents regarding the IK of traditional healthcare practice. So, people acquire and transmit orally through observation, demonstration and share through local folklores such as song, proverbs, poetry, storytelling, drama, dance on cultural, historical, political and health related shows.

#### **4.1.9.1. IK of traditional healthcare management practice**

When asked to specify if they had collected IK of traditional healthcare practices in the local communities, 10 (41.7%) had collected IK in the local communities, while 14 (58.3%) had not. By the methods used to capture IK of traditional healthcare practices from the communities, most of the respondents used personal visits when they are doing diagnosis and treatment, by participating in their normative dimensions when they are practicing. Stakeholders also collected IK when peoples sought information to solve their health problems by collaborating with various stakeholders.

The respondents who were not collected IK of traditional healthcare practices were mentioned various reasons why they did not collect IK of traditional healthcare practices such as lack of IK policy, lack of facilities, lack of funds, inadequate training on the management of IK, lack of IPR, poor knowledge sharing culture in the communities, inadequate number of staff.

Among ten (41.7%) respondents who reported as collected IK in the local communities, Seven (29.19%) of them indicates interest in managing IK as their major purpose for collecting IK. Other purposes were extension services 6 (25%), research 6 (25%), marketing healthcare inputs 4 (16.68%), to raise the profile of IK 3 (12.5%), and transfer to the next generation 2 (8.3%).

#### 4.1.10. Observation results

The observation is a type of data collection techniques in which the observer observes and wrote down what he/she observed. In this study, observation was carried out at the time of self-medication (applying home-made treatment) and treatment by traditional healthcare practitioners.

Accordingly, at the time of data collection from community members, there was observation at Gembo Kebele when one grandmother was applying self-medication on her daughters' son. At the time, the guy can't eat and drink anything as he told to her. By this, she understands as the disease is tonsillitis and the treatment should be by traditional medicine. Then, she going out and takes the root of a plant to treat him. Before treatment was carried out, she couldn't talk to others about the name of the plant. Accordingly, she crushed the root of that plant on the bench and put it into the materials locally called "sinii" that carries water to wash the crushed root. After five minute, she removed the root and gave that water for the patient via his nasal. After that, the patient makes sneeze and she said "be healthy" and told to me, this is the sign of to be healthy. By this, the researcher asked the question on how she gave the medicine (dosage in case of age). As she said, such kind of medicine is prohibited for children's who's their ages are below 15 and should be given for above 15 years old. However, at the time of treatment, I know the dosage by myself. According to the women, the name of the plant is qundabarbare.

The other observation was done when traditional healthcare practitioners treats physiotherapy the one who lives in Dile Kolba Kebele. The health problem was the broken elbow while he rides a horse. In order to cure from this health problem, he consults a well known local therapist, who treats the broken body part, dislocation and serious muscle spasm problems. After one day the problem occurred, the patient come to the home of physio-therapist in the morning before he he washes his hands and eats food; because, as he told me, such kind of treatment should be in the morning before hand washed. As soon as he came, he washed the broken elbow by hot water and he softens with butter and pushes to place back in the right place. After that, he tied the upper and lower part of the hand by plant locally called "shambaqqoo" with cloth. As he said, the tied part should be checked and cloth should be changed every 3 days and advised the patient what he should do. Accordingly, he advised him as he eats and drinks hot drinks like Aja and eats food like anchote and should move the broken part here to there. By this treatment and advice from the therapist, the patient was totally cured within two weeks.

The third observation was done on the treatment given for a child whose age is 5 month in Dile kolba kebele. For the first time the health problem was unknown rather the body of the child is too thin and he always cry and unable to eat and drink. By this symptoms, his family doubts as the problem may be “Dhukkuba allaattii” and should take to locally well known healer of this disease. This healer was the famous healer of disease called Dhukkuba allaattii in the local community. By this, the family took the child to the healer at 3:00 AM. As he told the researcher, such kind of disease should be treated after 3:00 AM; as a result of such disease is first checked by the help of the light of the sun. That means, there is no treatment if there is no light of sun. Accordingly, as the observer follows, water was added in to a plastic, there was a traditional medicine prepared and it was added in to that water. After that, the shadow of that child was passed over on the mixture of water and medicine in the plastic for the purpose of checking whether the disease is Dhukkuba allaattii or not.

On this issue, the researcher has asked how he knows whether it is Dhukkuba allaattii or not. As he said, if it is this disease by using the medicine added in to water, I will see the image of an eagle in that water on his liver; because, if the shadow of the eagle was putted on his mother when she was pregnant, such kind of disease caught the child in his mother’s womb or if his mother’s have before, such kind of disease transmitted to the child when he used his mother’s breast and it makes the Childs’ body too thin. As he said, this disease is two types, namely: male eagle caused disease and female eagle caused disease. Everything is identified in that water. For instance, if it is female eagle caused disease, it requires soon treatment and if lagged, the child may be died.

The healer said that, such kind of disease is common for all aged human being (child, adult, old men). After he identified by using this methodology, the disease was Dhukkuba allaattii which was caused by female eagle and he told to them as it requires a treatment. Accordingly, he gave a medicine that was prepared from local plants that look like coffee and given for the child for one week consecutively by 10birr only. He told to the parents of the child that the medicine should be mixed with coffee and given orally through his mouth. One week later, the child was checked by the aforementioned methodology and the result shows as he is cured from that disease; because there is no eagle image observed on the water.

## **4.2. Discussion**

### **4.2.1. Perception and description of disease and its main cause**

The study findings confirmed as respondents understood human existential conditions as humans are made up of three attributes; namely: qaama dhaabbataa (physical body), afuura (spirit) and namummaa (personality). By this, disease is considered as a state of disequilibrium between the body and spirit. Their understanding of the human conditions is the basis of the type of treatment they offer to patients, which is holistic treatment that involves corrective and prevention care. A similar observation was made by Pender and Nola (2005), understanding of the human existential conditions and perceptions of disease and health enable people to prescribe therapy suitable for the disease. Respondents understanding of phenomena and conditions that are responsible for disease, enable them to seek the correct therapy for the diseases and symptoms they experience and observe. Such perceptions fall within the framework of medical anthropology (Sargent and Johnson, 1996). The framework concerns culturally determined concepts about disease and illness, and the cultural significance of health practices offered through self-medication or consultation with traditional practitioners.

### **4.2.2. Types of IK of traditional healthcare practice**

As the finding of the study revealed, there are three IK of traditional healthcare practices in the study community, namely: traditional medicine practices, physio-therapy (dhidhiibbaa) and spiritually treatment. Peoples in the community practice these IK of traditional healthcare practices set in cultural belief systems, practices, institutions, relationships and rituals by making close contact with the natural environment for corrective and preventive care.

Similar study was carried out in northern Sotho gives evidence that, the IK systems used for health care are embedded in cultural belief systems, practices, institutions, relationships and rituals developed by a group of people through generations of living in close contact with their natural environment and the types of IK is different from place to place (Sargent and Johnson, 1996; Pender and Nola, 2005). IK of traditional health care is therefore, the basis for self sufficiency and self-determination. Assessments of the importance of IK in traditional healthcare practices maintain that, every human culture has folk or indigenous health care knowledge systems and practices which vary across cultures (Kreuteretal and McClure, 2004; Helman, 2007).

### **4.2.3. Acquisition and transmission of IK of traditional healthcare practices**

As the finding of the study revealed that, the IK of traditional healthcare practices can be acquired and transmitted across and within generations. In this regard, the rate at which IK is transmitted among successive generations is declining; because of IK of traditional healthcare practices of the study community is not taught in formal school or other setting away from its natural settings. Like indigenous people in other parts of the world, the Horro Guduru Wollega people communicate their local wisdom among each other through oral communication and demonstration methods.

In this study, four mechanisms of IK transmission such as transmission from parents and grandparents to children which is equivalent to vertical transmission, transmission from non-parental social group, mainly community elders to children (oblique transmission), transmission among the peer groups (horizontal transmission) and acquired from once own experience and school. According to Cavalli and Feldmen (1981), there are three paths of IK acquisition and transmission, namely vertical, horizontal and oblique in which vertical transmission occurs between parent and children; oblique transmission involves the interaction beyond parent and child and horizontal transmission involves knowledge transfer between the peer groups.

The study finding revealed that, more than 95% of the IK of traditional healthcare practices have acquired from their parents. Similar finding was reported by Hewlett and Cavalli (1986), Ohmagari and Berkes (1997) and Lozada et al. (2006); in their studies, parent-child transmission of IK was found to be the dominant mechanism. Undoubtedly, there is loose contact between parent and children, and between young people and community elders. Young people of Horro Guduru Wollega are not eager to acquire knowledge and skills related to traditional healthcare practices principally due to change in value system. Likewise, parents and elderly people are also not courageous to impart their local wisdom to the younger generation due to the expectation that their knowledge and skills are inferior to the knowledge and skills that their children get from formal schooling. The loose contact between and among elderly people is in turn attributed to modernization. The Cree people of Canada are also experiencing the same challenges regarding the transmission of IK (Ohmagari and Berkes, 1997).

#### **4.2.4. Sharing of IK of traditional healthcare practices**

As the study finding showed, sharing of IK of traditional healthcare practices makes the community knowledgeable about IK of traditional healthcare practice; in that peoples can understand about how to identify disease and its' main cause, how and by what to treat the disease, and understand the importance of those things used for treatment in the environment. However, according to the finding of the study, IK of traditional healthcare practices did not fully shared; because of socio-cultural factor, poor knowledge sharing culture, selfishness and lack of awareness and resistant to change. Johannsen (2000) and Kim and King (2004) studied the IK sharing and the factors that limit the sharing of IK such as socio-cultural factor, poor knowledge sharing culture, selfishness and lack of awareness and resistant to change were putted as factors to sharing of IK of traditional healthcare practices.

As the study finding revealed that, IK of traditional healthcare practices were shared at individual, group and community level through different folklore activities such as proverb, poems, storytelling, dances, songs, diabetes at different time. In the organizational context, there are various instruments to support the sharing of organizational knowledge which cover all physical, technical and organizational aspects of individual and group working context this finding is agreed with the study by Probst et.al (2000); in that, the findings showed that, there were no pre-defined structures and instruments in the surveyed communities to enable knowledge sharing other than using local folklores. The other previous study by Owuor (2007) found that, IK was commonly shared among individuals and within the communities through events such as folklore activities.

#### **4.2.5. Barriers that hinder the management of IK of traditional healthcare practices**

As the finding of the study showed that, poor recognition of IK and resistance to change were the most cited barriers in the acquisition of IK in the communities, with a score of 26 (65%) each. Lack of IK records 25 (62.5%), poor knowledge sharing culture 22 (55%), lack of trust 19 (47.5%), socio-economic factors 17 (42.5%) and lack of appropriate IPRs 15 (37.5%) were also the major factors in acquiring traditional healthcare practices IK.

According to the study finding by Croteau and Dfouni (2008), the major barriers that faced local communities when acquiring IK of traditional healthcare practices were categorized under three categories, namely; personal barriers including poor recognition of IK and resistance to change,



ignoring the IK system due to the formal education system, social barriers such as poor recognition of IK, difficulties in knowing IK holders, conflicts at family level, existence of traditional structures, and customs and taboos and disappearance of plant species, poor knowledge sharing culture and external barriers are inadequate government efforts to recognize and record IK, to establish rural knowledge resource centers and to improve the existing IPR.

The study finding indicates poor recognition of IK 31 (77.5%), poor knowledge sharing culture 29 (72.5%), lack of trust 26 (65%), resistance to change 21 (52.5%), lack of IK records 20 (50%), social-economic status 18 (45%), selfishness; occurrence of conflicts within families; use of conventional technologies, traditional structures, customs and taboos; some IK holders required to be paid in order to share their knowledge; and illiteracy; barriers that inhibited peoples from sharing their traditional healthcare IK.

According to the study finding by Rankowana (2009) on IK in primary healthcare showed, poor recognition of healthcare practice of IK, poor knowledge sharing culture, lack of trust and lack of a knowledge resource was the major barrier to sharing of IK of traditional healthcare practices. As the study finding of Holsapple and Joshi's (2000) and Myers (2006), management (leadership), resources (financial, human, material, and knowledge), and environment (government, economic, political, social, and educational climate) are the major knowledge sharing barriers.

As the study finding, poor recognition of IK 32 (80%) and lack of efforts to preserve IK 29 (72.5%) were the most cited challenges in preservation of traditional healthcare practices IK. Other major barriers were poor knowledge sharing culture 28 (70%) lack of trust 25 (62.5%), social status 23 (57.5%) and problem of exclusion of IK in the formal education system is 19 (47.5%). Other challenges included high illiteracy level of the early IK custodians had undermined the preservation of IK. A report provided by the Australian Institute of Aboriginal and Torres Strait Islander Studies identified barriers to preservation of IK including political pressures, social and economic pressures, territorial pressures, poor recognition of IK, lack of efforts to preserve IK had undermined the preservation of IK.

## Chapter Five

### Conclusion and Recommendations

#### 5.1. Conclusion

This research is aimed to find out the extent to which KM approach is used to manage the IK of traditional healthcare practices in Horro Guduru Wollega zone, North-Eastern part of Ethiopia.

As the finding revealed that, disease is defined as the disequilibrium between physical body and spirit; whereas God, ancestral spirit, witches and sorcerers, ecological factor and biological and psychological factors are disease etiologies. To treat diseases' of these etiologies, peoples use three IK of traditional healthcare practices including traditional medicine, physiotherapy and spiritually treatment. The usage of IK of traditional healthcare practices is at a decreasing rate due to infrastructural development such as health facilities, road, transportation, mass media, the emergence of new religion and the development of formal education.

The local people have been transferring their local wisdom through vertical (parent-children), horizontal and oblique paths in which parent-to-children path is the dominant one. Bio-physical and socio-cultural setting such as gadaa institutions, ya'i oda and other sacred places are the setting in which IK of traditional healthcare practices are acquired and transmitted. Peoples practice folklore activities such as proverb, storytelling, drama, dance, debates, song and poetry to share IK of traditional healthcare practices. Peoples applying self-medication by using simple house hold products to treat naturally occurring diseases; but, required traditional healthcare practitioners' if their knowledge of self-medication is failed. Traditional healthcare practitioners have acceptance by their work in the community; but in some cases, they are considered as witchcrafts by some peoples for instance by religious leaders and health workers and named by the disease they cure.

KM is concerned with all process related to acquisition, sharing and preservation. In doing so, these KM processes (acquisition, sharing and preservation) are affected by poor recognition to IK, poor knowledge sharing culture, lack of trust, selfishness, lack of IK record and social status. As to the study finding, IK of traditional healthcare practices is not captured and managed to make IK for future use and save IK from ever loss. To do that, IK acquisition framework and IK management strategy is developed to capture and manage IK of traditional healthcare practices to make IK for future use and save IK from ever loss.

## 5.2. Recommendations

The following recommendations are forwarded for the local community, community leader and elders, young generations, governments, higher education institutions, stakeholders and researchers regarding the IK of traditional healthcare practices.

- ❖ The IK of corrective and preventive care should be incorporated in to healthcare programs to promote the WHO principle to supplement healthcare services and promote the spirit of self-reliance and self determination.
- ❖ To alleviate IK of traditional healthcare from ever loss, there should be awareness of young generation, incorporating IK of traditional healthcare practice in to school curriculum and consideration and incorporation of IK in the development agenda, policy and strategies and local community based program of environmental education.
- ❖ Local elders and leaders should advice religious leaders and health officers as they should change their negative attitude towards IK of traditional healthcare practices and there should not be a hesitation on local healers by the disease they heal rather than encouraging and protecting their IK of traditional healthcare.
- ❖ As the dominant mechanisms of IK transmission among the study community is vertical (parent–child), parents should play a great role in equipping and encouraging their children to become strong to acquire the local wisdom.
- ❖ The local community, community leader and elders should maintain indigenous institutions such as gadaa and yaa'ii odaa institutions; so that, the institution will have their own contributions in strengthening the tradition of taking one's own child to traditional healthcare practice, rituals practices, local meetings and telling folktales, history and culture of the people.
- ❖ There should be extensive research with regard to the how of the documentation process of indigenous practices as well as socio-cultural practices and the capturing of medicinal plants.
- ❖ Stakeholders, government, researcher, local community and higher education institutions should participate in capturing and managing IK of traditional healthcare practices by using IK of traditional healthcare practices acquisition framework and management strategies to save IK from ever loss.

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## Appendix A: Group discussion with traditional healthcare practitioners

### General Information

1. Gender: Male  Female
2. Occupation: farmer  house wife  merchant
3. Educational level: high school  Elementary  Illiteracy   
Post-secondary  other, please specify.....
4. Religion: orthodox  protestant  muslim  others \_\_\_\_\_

### Part I: Traditional healthcare practitioners' perception and description of disease

1. How would you describe a disease/illness?
2. What are the main causes of disease in your community?

### Part II: Identifying types IK of healthcare practices by traditional healthcare practitioners.

3. What is/are the types of IK of traditional healthcare practice used in your community (physio-therapy and/or traditional medicine practice and others)?
4. If traditional medicine, for which type of disease do people in the community mostly use these IK healthcare practices?

For human being disease  for livestock disease  others.....

5. If Q#4 is for human being:

S. No	Name of disease (Afan Oromo)	Equivalent medical term
1		
2		
3		
4		

6. If Q#4 is for livestock, please tell me the following.

S. No	Disease name (Afan Oromo)	Equivalent veterinary term
1		
2		
3		
4		

7. From what do you prepare those traditional medicines?

From plant  from Animal product  from minerals  others.....

8. If from plant, please tell me the following information about major medicinal plants.

a. Part of the plant used for medicine

S. No	Local name	Habit	Plant parts used	Disease it cures	System of preparation, application and dosage
1					
2					
3					
4					
5					

b. Preparation method

i. Used alone, mixed with other etc.

ii. Condition: dried, fresh, both.

iii. Preparation forms: crushed, powder, chewed, concoction etc.

c. Dosage based on gender, age, children/adult

d. Route of administration (oral, nasal, dermal)

e. Its' Effectiveness

9. If Q#3 is physio-therapy, please tell me the following

S. No	Health problem	When	How	By what	Causes of the problem	Advices/recommendations
1						
2						
3						

10. Which types of IK of traditional healthcare are common and known by many people and which one didn't in the community? Why?

11. Do you document what you know or keep it in your mind and transfer orally?

12. Does the use of traditional healthcare vary because of economic status, social and cultural background or any other factor?

13. Is the trend of usage of IK of traditional healthcare decreasing or increasing? In either case what is/are the reason(s)?

**Part III: Acquisition and transmission of IK of healthcare practice**

1. Where do you obtain knowledge with regards to healthcare? (Possible to select multiple answers)

- Personal experience  Church/mosque   
Parent or family  Neighbor/Friends   
Demonstration and observation  other please specify.....

2. Do socio-cultural (normative) dimensions have role in acquisition of IK of healthcare?

- Yes  No

3. If Q#2 is yes, what are the normative (socio-cultural) dimensions used for IK of healthcare acquisition and transmission?

4. In what setting this IK of healthcare transmitted and acquired?

5. By what mechanisms/paths this knowledge of healthcare transferred/acquired mostly?

- Parent to children  non-parental social group to children   
Among the peer groups  once own experience  other, please specify\_\_\_\_\_

**Part IV: Sharing of IK of traditional healthcare practices**

1. Why is IK of traditional healthcare shared?

2. What is/are the main problem(s) or reason(s) of not sharing IK of traditional healthcare (if any)?  
What solutions are provided?

3. Do folklore activities are practiced in the village to share IK? Yes  No

4. What types of folklore are practiced?

- Drama  Dance  Plays  Song  Storytelling  Proverbs   
Debates  Poetry  other please, specify.....

- a. On what occasions are the folklore performed? \_\_\_\_\_
- b. On what occasions are the folklore performed \_\_\_\_\_
- c. Purpose of performing folklore \_\_\_\_\_
- d. Who attends in these occasions when folklore is performed? \_\_\_\_\_
- e. Who performs the activity? \_\_\_\_\_

**IK sharing flow mechanism (multiple answers are possible)**

S. No	IK of healthcare sharing flow mechanisms	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	IK is carefully accessed and used easily by local communities					
2	There is a forum for knowledge sharing, like face to face (example, meeting)					
3	IK is shared informally at individual level					
4	Everybody is interested to share IK					
5	Old and knowledgeable people in the community feels responsible to transfer/share IK					
6	Younger generation is learning about IK from Elders					
7	No one is concerned to share IK					
8	The impact of modernization/technology is high on sharing IK					

## Appendix B: Semi-structured interview

### Section I: semi-structured interview with community members

#### General Information

1. Gender: Male  Female
2. Age: 20-50  51-90
3. Marital status: singled  Married  Divorced  Other
4. Educational level: Primary  Secondary  Graduate  illiteracy

#### Part I: describing disease and its main cause

1. How would you describe a disease/illness?
2. What are the main causes of disease in your community?

#### Part II: Identifying self-medication and corrective care sought from traditional healthcare practitioners.

1. What is meant by self-medication?
2. Which diseases do you cure and prevent by self-medication? How?
3. What are the indigenous mechanisms you would use to prevent being affected by disease/illness?
4. Which indigenous corrective and defensive care is required from traditional health practitioners?
5. Which diseases are cured by traditional health practitioners?
6. What health care facilities are available in your community?
7. Which one do you prefer? Why?
8. What is the traditional health practitioner's consultation fee?
9. Is the fee is higher than what you could pay in clinics and hospitals

#### Part III: Barriers to effective management of IK of traditional healthcare practices

1. What problems do you face in acquiring, sharing and preserving healthcare IK?

s. No	Problems	Acquisition	Sharing	Preservation
1	Poor knowledge sharing culture			
2	Lack of trusts			
3	Political dimensions or social status			
4	Poor recognition of IK			
5	Lack of information materials on IK			
6	Lack of a nearby library			
7	Lack of appropriate intellectual property rights to govern IK			

## Section II: Interview questions with stakeholders

### General information

- a. Gender: A. Male  B. Female
- b. Age: 30-45  46-60
- c. Educational level: Diploma  Degree  Masters  PhD

### Part I: General overview of IK of healthcare

1. Are you aware about practitioners who possess traditional healthcare IK?  
Yes  No
2. How is their acceptance by the community members?
3. How can you best describe the value that IK adds to the practice?
4. How does the practice relate to the socio-cultural values, meanings and the wellbeing of the community?
5. Is the knowledge behind the practice known to all members of the community or only to specialists?
6. How is the knowledge behind the practice transmitted within communities (between members, between generations)?

### IK of traditional healthcare management practice

7. Do traditional healthcare IK collected from the local communities?  
Yes  No
8. If question #7 is yes, by what strategy do traditional healthcare IK in the local communities collected? (Please explain the strategies used).

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9. If question #7 is NO, what are the reasons?
10. As you think; what is the purpose of collecting traditional healthcare IK?  
Raise the profile of IK  Interest in managing IK   
Research  addition services   
Marketing traditional healthcare inputs  Teaching   
to transfer to the next generation  other specify \_\_\_\_\_

### Appendix C: Observation checklist

S. No	Observation	Note
1	Types of IK healthcare (physio-therapy, traditional medicine)	
2	Diagnosis (age, background----)	
3	Treatment (is based on either physio-therapy or traditional medicine)	