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Knowledge Management Approach and a Framework for Sharing and Acquisition of Indigenous Knowledge of Traditional Healthcare Practices: the Case of Horro Guduru Wollega Zone, Ethiopia

HAMBISA MITIKU
Lecturer, Department of Information Science
Faculty of Engineering and Technology
Assosa University, Ethiopia
WORKU JIMMA[1]
PHD candidate, Tehran University of Medical Sciences, Iran
Lecturer, Department of Information Science
College of Natural Sciences
Jimma University, Ethiopia
CHALA DIRIBA
Lecturer, Department of Information Science
College of Natural Sciences
Jimma University, Ethiopia

Abstract:

This study aimed to investigate Knowledge Management approach for sharing and acquisition of Indigenous Knowledge (IK) of traditional healthcare practices in local communities of Horro Guduru Wollega zone, Ethiopia. This study used descriptive research design through qualitative research method to collect reliable data about the status of sharing of IK, acquisition and transmission of IK of traditional healthcare practices and the barriers to effective management of IK of traditional healthcare practices. The respondents were taken from local communities (traditional healthcare

[1] Corresponding author: worku.jimma@yahoo.com

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 results showed that the local communities shared IK of traditional healthcare by using folklore practices in socio-cultural events such as large gatherings, locally known as "ya'i odaa" and wedding ceremonies. 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, transmission and the use of IK of traditional healthcare is at a decreasing rate. Poor knowledge sharing culture, lack of trusts, political dimensions or social status, poor recognition of IK, lack of a nearby library are the barriers of effective management of IK of traditional healthcare practices in the study community.

Key words: Indigenous knowledge, Knowledge Management, traditional healthcare practices, IK sharing, IK acquisition.

1. INTRODUCTION

Indigenous Knowledge (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). 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 of traditional healthcare practices is often revealed through customs, values, lifestyles and spiritual beliefs (Iroegbu, 2006). Most indigenous peoples transmits IK through

traditional education and by a means of traditional songs, stories, legends, village meetings. Sometimes IK 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), due to the fact that the knowledge of traditional healthcare practice is transferred orally from generation to generation, local experiences 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, to enhance the benefits that IK can provide in health care, there is a need to collect and explicitly manage IK in order to pass the knowledge to the next generation.

To manage IK more efficiently, some indigenous knowledge systems (IKS) have emphasized 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.

Many countries adopted service 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. 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).

Lack of a cohesive approach for managing IK in developing countries also 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). 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.

OBJECTIVES OF THE STUDY

The objectives of this study are:

- 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 find out the barriers that hinder the effective management of IK of traditional healthcare practices in the rural communities

2. REVIEW OF RELATED LITERATURE

According to Nonaka (2006), Knowledge is personalized or subjective or may be explicit and/or tacit, individual and/or collective. KM is concerned with the systematic management of explicit and tacit knowledge and associated processes of creation, organization, diffusion, use and exploitation (Nonaka, 1996). 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).

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 in figure 1.

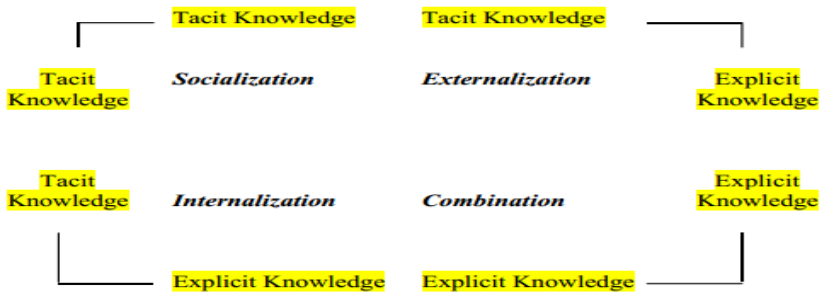

Figure 1: Knowledge conversion model (taken from Nonaka, 1996)

IK is a 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 did not manage, formalize, jot down and codify.

Rural children 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.

According to Ohmagari and Berkes (1997), the traditional learning sequence of IK started with familiarization to the local biophysical and socio-cultural environment. 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. 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.

IK is clearly transmitted from one individual to another in a very personal way; in that, it is oral in its nature. Oral communication and observation are the two modes through which IK is acquired and transmitted. 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. 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.

IK is predominantly tacit, embedded in the practices and experiences of its holders commonly shared and expressed locally by oral means 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). According to Franklin (2008) such folklores are performed in socio-cultural events for empowering the peoples with the relevant knowledge for condition at hand. According to Arevalo (2007), 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 such as organizations, work or business contacts and other intermediated contacts.

KM is a process of knowledge creation, acquisition, sharing, preservation and application of knowledge. The major barriers that faced local communities when acquiring IK of traditional healthcare practice were categorized as personal barriers, social barriers and external barriers (Croteau and

Dfouni, 2008). 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). According to a report provided by the Australian Institute of Aboriginal and Torres Strait Islander Studies to the Secretariat of the Convention on Biological Diversity the barriers to preservation of IK includes 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.

3. RESEARCH METHODOLOGY

3.1. Research design

For this study, descriptive research design through qualitative research method was used. The study was conducted in two districts of rural communities of Horro Guduru Wollega zone namely, Jimma Rare and Jimma Horro districts which are selected based on the coverage of forest used as a source of traditional healthcare, 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 (the smallest administrative unit in Ethiopia) 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.

The study populations are traditional healthcare practitioners, the community members and other stakeholders such as Non-Governmental Organization (NGO), Health bureau

and Agricultural bureau. 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. Focus group discussion, semi-structured interviews and observations were data collections techniques to collect information about sharing and acquisition of IK of traditional healthcare practices in the study area.

3.2. Data analysis procedures

Qualitative data was analyzed by using thematic content analysis. Analysis were done by producing themes such as acquisition and transmission of IK of traditional healthcare practices, sharing of IK of traditional healthcare practices, barriers to effective management of IK of traditional healthcare practices.

4. RESULT AND DISCUSSION

The study found that the following are the major means by which traditional healthcare practices acquisition and transmission practices used to take place at the study sites since time immemorial.

Gadaa institution: Gadaa system is a traditional social organization of the Oromo people, whereby 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. Elderly people conduct the majority of the activities under gadaa system and other indigenous institutions.

Ya'i odaa institution: It 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.

Sagada: 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.

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.

Settings in which indigenous knowledge of traditional healthcare practices acquired and transmitted

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.

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.

Mechanisms and paths of indigenous knowledge of healthcare transmission and acquisition

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 in what the vertical transmission is the dominant one were identified.

Sharing of indigenous knowledge of traditional healthcare practices

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. However, according to the data from group discussion, IK of traditional healthcare practices did not fully shared; because of the Socio-cultural factor, Poor knowledge sharing culture, lack of awareness**,** resistant to change lack of interest to learn and share. In the study area IK is commonly shared among individuals and within the communities through events via folklore activities listed in table 2.

Table: 1: 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

Barriers that hinder the management of indigenous knowledge 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 identified barriers that hinder the acquisition, sharing and preservation of IK of traditional healthcare practices in the local communities (Table 2a, Table2b and Table2c).

Table: 2a. 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%

Table 2b. 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%

Table 2c. 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	7	17.5%	6	15%	9	22.5%	7	17.5%	29	72.5%

	preserve IK										
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%

A framework for the acquisition and transmission of IK of traditional healthcare practices

This section presents the IK of traditional healthcare practices acquisition and transmission framework for the study area. Accordingly, IK is acquired and transmitted orally by using folklore activities in bio-physical and socio-cultural settings and in different normative dimensions. 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 2.

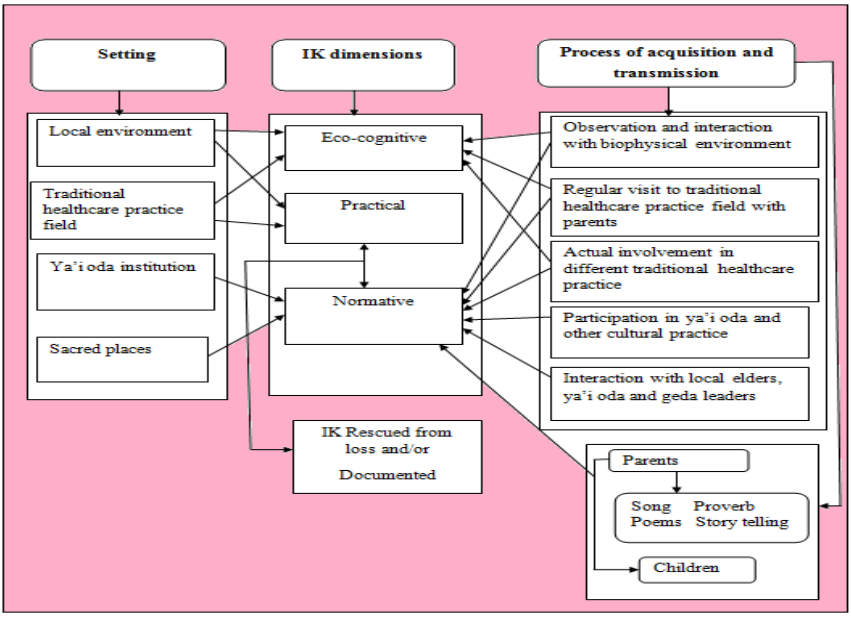

Figure: 2: IK acquisition and transmission framework of traditional healthcare practices at Horo Guduru Wollega Zone

CONCLUSION

This research is aimed to study the KM approach and to develop a framework for sharing and acquisition of IK of traditional healthcare practices in Horro Guduru Wollega, Ethiopia.

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

KM is concerned with all process related to acquisition, sharing and preservation and these processes are affected by poor recognition to IK, poor knowledge sharing culture, lack of trust, selfishness, lack of IK record and social status. The finding of this study showed that, IK of traditional healthcare practices is not captured and managed to make IK for future use and save IK from ever loss. To this end, IK acquisition and transmission framework is developed so that if applied IK can be captured and managed and thus rescued from ever loss.

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