BEHAVIOURAL PATTERNS AND ASPECTS OF SHARING INDIGENOUS HUMAN HEALTH KNOWLEDGE AMONG TRADITIONAL HEALERS IN TANZANIA

John Jackson Iwata
Postdoctoral Research Fellow,
University of KwaZulu-Natal

and
Ruth Hoskins
Associate Professor
Information Studies Programme
School of Social Sciences
University of KwaZulu-Natal
South Africa

Abstract

The application of indigenous human health knowledge (IHHK) for healing various human physical ailments has recently gained new momentum in many African countries, including Tanzania. Thus, sharing of such knowledge is viewed as the main strategy and mechanism for its sustainability. In Tanzania, efforts to establish collaboration in health service delivery between traditional healers and conventional health practitioners as one of the IHHK sharing strategies have been put in place. However, there is no comprehensive study assessing the behavioural patterns and aspects of sharing of such knowledge among traditional healers.

This study employed a mixed approach for data collection and analysis. Systematic sampling was used to select traditional healers for the study whilst purposive sampling was used to involve coordinators and directors of the Traditional and Alternative Health Practices Council, and Heads of Departments at the Institute of Traditional Medicine. A total of 26 respondents participated in this study.

The results show that traditional healers shared IHHK through mentorship, interaction and socialisation. Other ways included collaboration, training and professional networks. The aspects of sharing involved exchange of patients and experiences on healing or dealing with a particular ailment. However, in the process, the mistrust and stigmatisation of IHHK hindered collaboration between traditional healers and conventional health practitioners. Various strategies have been proposed to address this, including the prioritisation of budgetary allocation for sharing IHHK; the building of trust between and among these health practitioners; having in place knowledge management and

sharing policies which clearly state the incentives and rewards for those who share their knowledge; and the establishment of a designated position for a member of staff responsible for ensuring IHHK is shared.

Keywords: *Indigenous Knowledge; Human Health; Indigenous Human Health Knowledge; Health Practitioners*

Introduction and background to the study

The application of indigenous human health knowledge (IHHK) for healing various human physical ailments has recently gained new momentum in many African countries, including Tanzania. Studies including Ghimire and Bastakoti (2009), Gurdal and Kulturn (2013), Kanwar, Sharma and Rekha, (2005), Ghoshi and Sahoo (2011), and Caldwell (2007) have shown that in many parts of the world (especially in developing countries, including Tanzania) there is an increased demand and use of IHHK for various human physical ailments. The reasons for such an increase include ease of availability, cost effectiveness and being the only source of healthcare where conventional health resources are scarce (Iwata, 2015). It is however important to note that such knowledge is as varied and detailed as the history of African societies, and that such knowledge has passed through different modes of production in history, and each mode had its own impact (Dharampal, 2006). Proper management of such knowledge through a sharing mechanism is thus viewed as the main strategy for its continuity and its preservation for future generations. Based on the nature of knowledge generation and creation, to some people sharing IHHK is not always an easy concept, although it is very important. Thus, countries including South Africa, Tanzania, China, India and others are urged through various international agreements and recommendations to establish legal and administrative frameworks for sharing such knowledge. For example, the World Health Assembly of 1978 called upon governments to incorporate traditional healers into national health systems, and traditional medicines into national drug policies and legislation as a mechanism for recognition of such knowledge (Iwata, 2015).

Knowledge sharing practices can be observed in both economic and socio-cultural aspects. The question of the behavioural patterns of sharing, and knowledge-sharing patterns of traditional healers in Tanzania is very important and relevant in this context. The study by Chirangi (2013) observed the existence of collaboration between traditional healers and conventional health practitioners in Tanzania. However, Chirangi's (2013) study was silent on the impact of the collaboration in its influence on the process of sharing IHHK rather than exchanging patients between the two health systems. This is irrespective of the existence of reputable traditional healers in various areas of Tanzania such as Mwanza, Singida, Njombe and Mtwara. The failure to establish appropriate arrangements for such knowledge transfer between the health care systems

threatens the continued existence of traditional health care practise as the knowledge is held by the practitioners with limited sharing with the next generation, and thus could be potentially lost on their passing.

Statement of the problem

Indigenous human health knowledge (specifically the traditional medicine) is in increased use due to various reasons as mentioned earlier. Many efforts (including the creation of a traditional healers' network; the establishment of collaborative health services delivery between the traditional healers and conventional health practitioners; and the creation and implementation of various policies and strategies to encourage sharing of IHHK) have been put in place (Iwata, 2015). These entire environments assume that the traditional healers' performance in sharing their knowledge of healing at individual or networked level would have been measured and rewarded through professional recognition as well as monetary reward as a powerful motivator (Davenport & Prusak, 2000; Iwata, 2015). However, the behavioural patterns of sharing IHHK among traditional healers in Tanzania are not well-known, and are thus not easily measured and rewarded. This is despite the technological progresses (the acceleration of information and communication technologies) which add value to the dimension of knowledge sharing in the context of increased use of traditional health care systems. This study is intended to uncover the behavioural patterns of knowledge-sharing of traditional healers in Tanzania.

Objectives of the study

The general objective of this study was to investigate the knowledge-sharing behaviour of traditional healers in the following specific objectives:

1. general attitude towards sharing IHHK and the roles played by stakeholders in the process;
2. purpose of sharing such knowledge and the communication channels preferred for sharing;
3. types/aspects of IHHK shared; and
4. factors that inhibit or motivate sharing IHHK among and between health practitioners (traditional healers).

Research questions

1. What were the general attitudes towards sharing of IHHK in Tanzania?
2. What were the roles played by stakeholders in sharing IHHK?
3. What were the purposes of sharing IHHK? And what communication channels were preferred in order to share IHHK?
4. Which IHHK was being shared?
5. What factors inhibited or motivated sharing of IHHK among and between health practitioners?

6. How should knowledge-sharing performance be measured and rewarded?

Significance of the study

The significance of this study is due to the fact that there are few studies conducted on management of indigenous knowledge in Tanzania. There has not been any comprehensive research from an information studies' perspective focused on sharing of IHHK among and between health practitioners. This is despite the increased use of ICTs which facilitate the easier sharing of knowledge. Therefore, conducting this study will not only contribute to literature in this field but also explore various perspectives to encourage sharing of such knowledge among generations.

Literature review

Dharampal (2006) views IHHK as having a long history in that for centuries, people have relied primarily on medicinal plants to cure or treat a variety of human physical ailments. The literature shows that the world (specifically developing countries) has experienced an increased use of traditional medicines and medicine plants as the basis for the maintenance of good health (Ghimire and Bastakoti, 2009; Gurdal and Kulturn, 2013; Kanwar, *et al.* 2005; Ghoshi and Sahoo, 2011; Caldwell, 2007). Furthermore, the study by Dlamin (2001) on facilitating collaboration between traditional healers and western health care practitioners in the management of chronic illness in Swaziland found that despite the introduction of modem medicine by the colonial powers, inhabitants of Africa had never stopped utilising traditional medicine. A number of factors for the increase demand and use of traditional medicines have been provided by authors in knowledge management and medical fields.

Some authors (Gessler *et al.* 1995; Kanwar, *et al.* 2005; Ghoshi and Sahoo, 2011; Caldwell, 2007; Yetein, *et al.* 2013) have mentioned that the increased demand for traditional medicine is due to its being non-narcotic with limited side effects, easily availability cost effective and being the only source of healthcare for the poor or rural communities where western health resources are scarce. Other motivating factors for the increased demand of traditional medicine include dissatisfaction with treatment received or negative experiences with conventional medical practitioners, the price of traditional medicine, i.e. traditional medicine prices range from either been cheap to very expensive and thus was seen to deliver value for money in certain instances (Iwata, 2015). In the case of Tanzania, Stangeland *et al.* (2008) discovered that due to the lack of proper conventional healthcare systems, traditional medicine is often the first choice for provision of primary health care.

Literature recommends the necessity of preserving indigenous knowledge for the benefit of future generations. Researchers assert that the best way to preserve IK is to encourage students to learn from their parents, grandparents and other adults in the community (Dexit and Goyal 2011), thus sharing such knowledge in order to protect such knowledge from being lost. Mchombu (2004) urges elders with knowledge and skills on the use of certain medicinal plants to share their experience with young people as the way of preserving such knowledge; according to Cetinkaya (2009) passing knowledge and experience to young people is an empowerment of local people and youth.

Methodology

Data and information for this study were obtained using the mixed methods approach, but by a largely qualitative methodology. The probability and non-probability sampling in its different techniques was employed in involving participants in the study. Probability sampling through systematic sampling was used to involve respondents where samples were chosen in a systematic or regular way (Powell, 2002). Systematic sampling was used to include knowledge owners in the study. Non-probability sampling through purposive techniques was employed to involve participants occupying administrative positions as directors, Heads of Department or units in the selected institutes (Sillitoe, *et al.* 2005; Saunders, *et al.* 2009). A total of 26 participants were involved, these included analysis of 18 traditional healers, four (4) District Co-ordinators of the Traditional and Alternative Practices Council (TAHPC), one (1) Registrar of the TAHPC and three (3) researchers from the Institute of Traditional Medicine (ITM) of Muhimbili University of Health and Allied Sciences. The following districts and their respective regions in bracket participated in this study: Magu (Mwanza), Singida urban (Singida), Njombe urban (Njombe), and Masasi (Mtwara). In addition, the Institute of Traditional Medicine (Dar es Salaam region) was involved in the study because the institute deals directly with research on traditional medicine and hence staff work closely with traditional healers. Data was obtained from both secondary and primary sources. Semi-structured face-to-ace interviews were the main methods for collecting data in the field. However, other methods of data collection such as focus group discussions, direct observation and documentary review were also used. Both qualitative and quantitative techniques of analysing data were conducted. While the analysis of qualitative data was completed through thematic content analysis, the quantitative data was manipulated using SPSS.

Results

This section provides analysis of the collected data on the knowledge-sharing behaviour of traditional healers in selected districts in Tanzania. The study aimed at investigating the general attitude towards knowledge sharing, aspects

and purpose of sharing, communication channels preferred, and factors that constrain or motivate knowledge-sharing among traditional healers. The presentation of the results is based on the approach of giving the purpose of each thematic question before showing the responses. Possible reason(s) for each response are also provided.

Attitude and knowledge-sharing patterns of traditional healers in Tanzania

Questions under this thematic area were intended to investigate the attitudes and patterns of sharing healing knowledge among traditional healers. In order to understand respondents' understanding of the importance of sharing IHHK, respondents were given a mixture of statements to review. The range of their responses has been indicated in Table 1.

Table 1: Attitude on knowledge-sharing among traditional healers (n 18)

	Number of response (%)				
Attitude	**Strongly agree**	**Agree**	**No opinion**	**Disagree**	**Strongly disagree**
It is necessary and worth sharing traditional healing knowledge for its existence and future use	14 (54%)	5 (19%)	7 (27%)	—	—
Sharing traditional healing knowledge is the means to diffuse and increase innovation in health and medical science	7 (27%)	8 (31%)	—	7 (27%)	4 (15%)
Sharing the IHHK is beneficial to all stakeholders (traditional healers, researchers and users)	3 (12%)	4 (15%)	7 (27%)	8 (31%)	4 (15%)
There should be legal framework to force traditional healers to share their knowledge	—	1 (4%)	4 (15%)	5 (19%)	16 (62%)
Sharing IHHK should voluntarily be done by traditional healers	21 (81%)	1 (4%)	4 (15%)	—	—

Source: Field Data, 2014

The findings as indicated in Table 1 show that majority of the respondents (73%) agreed or strongly agreed that it is necessary and worth sharing traditional healing knowledge for its existence and future use. Based on the data in Table 1, results show that 58% of respondents agreed or strongly agreed that sharing traditional healing knowledge is the means to diffuse and increase innovation in health and medical science. However, other respondents (46%) disagreed or were not sure if there were any benefits to be achieved by all IHHK stakeholders from sharing such knowledge. In addition, only a few (27%) of all respondents had no opinion on the matter. In consideration of the idea of having in place a legal framework to force traditional healers to share their knowledge, over 81% of respondents rejected the idea. A majority (81%) rather supported the idea that it should be done on a voluntarily basis; however others (15%) did not express an opinion.

In order to develop actual statistics of the traditional healers who would like to share their healing knowledge, participants were asked to state their attitude towards such practices. The results show that four (4) (22%) were not at all likely to share; 11 (61%) were very likely; and three (3) (17%) were likely to share their knowledge of healing methodologies. This suggests that traditional healers in Tanzania were 78% likely to share their IHHK with others on a voluntary basis. During an interview, one of the respondents commented that "*it is very important to share IHHK for its long existence, this is because doing that will simplify its preservation for the use by future generations and make easy to refer to*". However, the rejection of the idea of sharing such knowledge among the respondents was perhaps due to a lack of awareness on the importance of sharing the knowledge; or a lack of trust resulting from the absence of proper intellectual property rights (IPRs) to protect the knowledge and inventions from theft and misuse.

In addition, it was also recorded that some traditional healers did not share their knowledge because they asserted that the knowledge was a gift from God and identified that it was God himself who decided to give such knowledge to a particular person, but not through sharing. However, it was encouraging to note that the respondents generally possessed a positive attitude towards knowledge sharing and were aware of its importance. Therefore, based on these responses it is clear that most traditional healers had positive attitudes towards sharing IHHK. Sharing such knowledge is very important as it ensures the long-term sustainability of the knowledge. Among the important factors in the successful sharing of traditional knowledge is that of a voluntarily approach and active participation of those who would want to acquire such knowledge.

Patterns of sharing IHHK

During interviews, respondents were asked to state the circumstance under which traditional healers normally shared their knowledge. The aim was to understand the patterns under which traditional healers share IHHK. Based on multiple responses of 26 respondents, data show that 21 (81%) of the respondents were of the opinion that knowledge is transferred through passing it down to their offspring at family level, and to others who seek to become traditional healers; done frequently through the oral and practical based sharing system; and that some society elders who have expertise and who are the rich sources of such healing knowledge, frequently use this pattern of sharing. Seventeen (65%) participants stated that they share with peers through one-to-one collaboration, and that if a colleague has a problem or lacks resources to deliver his/service to the patient, then they can communicate with a colleague for assistance or collaboration. Others, namely 13 (50%) participants, mentioned that a traditional healers' network was an important pattern used in sharing healing knowledge. During an interview, one of the traditional healers pointed out that:

> *"To be frank and speak the truth we share our knowledge when we want to solve a particular problem collaboratively. This happens when a colleague cannot do it alone. However, it would be very good for us to frequently share our knowledge in order to keep our knowledge updated and having a chance to learn other various medicinal plants and its uses from other colleagues"*.

Another respondent commented that: "*we have our own associations and it is through such association we normally come together and discuss various matters related to our healing knowledge. Therefore, is from that context we do collaborate to solve various problems surrounding our activities and the community at large*". From the interview, it was observed that the networks pattern of sharing information involved two models for sharing, namely the intra-group and inter-group. In the context when the healing knowledge is shared within the network of traditional healers, it is known as 'intra-group sharing, whereas when it is shared outside the network, it is 'inter-group sharing'. The inter-group sharing normally requires people to have a memorandum of understanding (MoU) between the parties before they start collaborating. In this context, a lack of MoU makes collaboration between conventional medical practitioners and traditional healers very difficult, as one of the respondent pointed out, "*we rarely exchange patients and experiences on healing or dealing with a particular ailment with colleagues in health services provision*".

Data shows that sharing with family members, followed by members in a network of traditional healers dominates the sharing pattern of the IHHK. However, during an interview session with the Registrar of TAHPC, it was observed that people who voluntarily seek to become traditional healers'

contribute largely to the development process and the existence of such knowledge.

Purpose of sharing

Respondents were asked to explain the reason(s) as to why traditional healers share/would want to share their knowledge. Based on multiple responses, data shows that 19 (73%) respondents supported the reason that it is based on the intention to learn from others, and the desire to help others while marketing their knowledge. Certain self-centred reasons for knowledge sharing with other traditional healers were less pervasive; where 23 (88%) of the respondents said that they shared knowledge in order to receive reward or recognition in the community; while for seven (7) (27%) of the respondents, it was an opportunity to develop the image and opportunity to market their knowledge

Types/aspects of IHHK shared

In order to establish the status of readiness to collaborate and share IHHK with other traditional healers, respondents were asked to state their readiness in sharing IHHK. Results show that out of 18 traditional healers involved in this study, 72% were ready to share their knowledge whereas the remaining 28% were not. This finding shows that many traditional healers were willing to share their knowledge, whereas fewer were not.

Traditional healers who stated that they were ready to share their healing knowledge with peers were also asked to express their opinion on the aspects of IHHK which they shared/would share. Based on multiple responses of 13 respondents who showed such readiness, 69% had been sharing with their family members about the usefulness of some plants in healing, and the medicinal preparation process and use of some medicinal trees; while 31% shared with their peers the location where some medicinal trees are easily located. Others (38%) stated that they shared experience in providing answers to a particular problem within the networked group. However, it was observed that all these depended not only on the readiness and willingness to share but also on the appropriateness of the existing policies and guidelines. The rejection response towards sharing of IHHK with others was probably due to the lack of proper and effective intellectual property framework within which to share.

Factors constraining or motivate sharing of IHHK

The respondents were asked to indicate the possible factors that constrained active sharing of IHHK. Based on multiple responses, results show that the majority of the respondents in this study 19 (73%) were of the view that the factors included the issues related to individual factors such as lack of good relationships between knowledge owners; lack of awareness of the importance of knowledge sharing; and lack of trust and fear that their knowledge would be misused. Another important factor mentioned by 13 (50%) of respondents

related to organisational factors such as that organisational structure and a culture of sharing within an organisation appeared to hinder the sharing practices of IHHK. Among the mentioned sub-factors of organisational structure and culture included rewards and recognitions and work process. Another barrier related to technological factors that seven (7) (27%) respondents identified was that of poor ICT infrastructure and awareness on the use of such technology to facilitate sharing of such knowledge.

Discussion of the findings

The results of this study mainly based on the perspective and attitude of sharing IHHK among traditional healers. The concentration is specifically on the recurrent ways of which traditional healers as an individual or group perceive sharing their healing knowledge. Therefore, this section presents the discussion and interpretation of the presented results in the previous section.

Attitude and knowledge-sharing patterns of traditional healers in Tanzania

Attitudes have a great impact in either the success or failure of anything. In this study the findings show that respondents had a positive attitude towards sharing IHHK among traditional healers. The reasons provided for sharing included that sharing is the means to diffuse and increase innovation in health and medical science; as well as to ensure sustainability of such knowledge for future use. In providing the reasons for sharing, respondents mentioned the need to put in place a legal framework for security and protection of such knowledge from being stolen or misused by others. This response does not completely mean that in the study area respondents did not shared their healing knowledge. However, they shared with others on a voluntarily basis. Sharing on a voluntary basis was the concern of 78% of the respondents whereas the remaining 22% of respondents rejected the idea of sharing such knowledge. The reason(s) for the rejection was perhaps due to the lack of awareness of the importance of sharing knowledge; or it was due to lack of trust. Lack of trust is the result of the absence of proper intellectual property rights system (IPRs) or the presence of IPRs that do not consider the issues of the environment (where such knowledge is/was being invented and used).

Patterns of sharing IHHK

In the study area the patterns and methodology of sharing IHHK involved transferring such knowledge through passing it down to the offspring at family level and to others who seek to become traditional healers as mentioned earlier. This was stated by 81% of the respondents followed by 65% of the respondents who stated that they shared their knowledge with peers through one-to-one collaboration especially when a colleague had a problem or lacked resources to deliver his/her service to the patient. This shows that traditional healers were willing to share their healing knowledge, and that they did seek assistance or

collaboration but only when they need to solve a particular problem with traditional healers in their network.

Purpose of sharing

When respondents were then asked to state the purpose of sharing IHHK, 73% of respondents were of the views that it was a way of learning from others. To others sharing was used as a strategy and opportunity to develop the image and market their knowledge. Furthermore, the findings show that to some people sharing their IHHK was purposively done in order to gain a certain reward and/or recognition in the community. Therefore, it is from this perspective the sharing of IHHK is perceived to assist sharers to develop and provide efficient solutions to the problem. This is because sharing knowledge gives them an opportunity to learn from others, and therefore stimulates innovation. Therefore, sharing IHHK can also be considered as the means for motivation creation among traditional healers and others who would want to become practitioners of such medicine.

Types/aspects of IHHK shared

The results show that majority of the respondents (72%) were ready to share their knowledge with their family members and peers. Although respondents stated the aspects of knowledge to be shared, it is however important for the government and other stakeholders to create environment conducive for such sharing. Such environment should include the availability of proper IPRs and education on the importance of sharing IHHK. The presence of all these factors would create the readiness and willingness to share.

Factors constraining or motivating sharing of IHHK

From the findings it was revealed that in the study area there were many factors constrained the sharing IHHK. The factors were classified as individual factors, organisational factors and technological factors. Therefore, in order to fully deal with these factors and influence the management and sharing of IHHK, one is supposed to understand the stakeholders' mindset and its associated behaviors towards the practices. This is because the mindset and the behaviour of an individual can either facilitate or impede the successful sharing practice. Mindset entails the ways in which individuals make sense of the situations that lead to the formation of priorities. Having shared mindsets among traditional healers would obviously serve as the foundations of the culture of sharing the know-how and ultimately lead to common patterns of behavior among individuals in the organisation with the use of a specified technology to assist the process. Hence, the successful practice of sharing IHHK requires a specific mindset that is shared among key players who perform the respective roles.

Conclusion

The findings show that respondents in the study area had a positive attitude towards sharing of IHHK as they asserted that the practice was an essential and effective means of not only managing but also ensuring its survival and existence for current and future use. A surprising factor was the results which showed that certain traditional healers were unwilling to share their knowledge. In addition, various factors constraining sharing of IHHK were mentioned. The factors included lack of mutual trust and respect and IPR frameworks to share such knowledge.

Recommendations

To improve sharing of traditional healing knowledge among traditional healers, the following is recommended:

1. Organisations and governments should make efforts to foster cordial relationships among traditional healers and conventional medical practitioners through providing ample interaction opportunities by organising informal social events.
2. Professional networks of traditional healers should reconsider their collaboration approaches and put more emphasis on collaborative service provision to avoid unnecessary competition among traditional healers. A culture of knowledge sharing needs to be developed among traditional healers through sensitisation campaigns.
3. Health practitioners should start regarding their fellow health services providers as their knowledge partners instead of competitors; according to the findings, traditional healers are likely to share their ideas and knowledge is a proper IPR framework to do so exists.

References

Caldwell, K. I. (2007). Assigning medicinal plants value and estimating traditional environmental knowledge in Ghana, Africa using ethnobotanical measures, (Master's dissertation). Raleigh: North Carolina State University.

Cetinkaya, G. (2009). Challenges for the maintenance of traditional knowledge in the Satoyama and Satoum ecosystems, Nato Peninsula, Japan. *Human Ecology Review*. 16(1):27-40. http://www.humanecologyreview.org/pastissues/her161/cetinkaya.pdf. Accessed on 11/02/2013.

Chirangi, M. M. (2013). AfyaJumuishi: towards inter-professional collaboration between traditional and conventional medical practitioners in the Mara Region of Tanzania, (Doctoral thesis). Leiden: University of Leiden. https://openaccess.leidenuniv.nl/bitstream/handle/1887/20753/NIEUW%

20Chirangi's%20dissertation%20to%20Library%20-%20Copy.1.pdf?sequence=38. Accessed on 11/02/2014.
Davenport, T. H. & Prusak, L. (2000). *Working knowledge: how organisations manage what they know.* Boston: Harvard Business School Press.
Dharampal, H. (2006). Incorporating indigenous knowledge into the school science curriculum, (Master's dissertation). Durban: University of KwaZulu-Natal.
Dixit, U. and Goyal, V. C. (2011). Traditional knowledge from and for elderly. *Indian Journal of Traditional Knowledge.* 10(3):429-438. http://nopr.niscair.res.in/bitstream/123456789/12019/1/IJTK%2010(3)%20429-438.pdf. Accessed on 18/02/2013.
Dlamini, P. S. (2001). Facilitating collaboration between traditional healers and western health care practitioners in the management of chronic illness in Swaziland. Doctoral thesis. Durban: University of Natal.
Gessler, M. C., Msuya, D. E., Nkunya, M. H. H., Schar, A., Heinrich, M. and Tanner, M. (1995). Traditional healers in Tanzania: socio-cultural profile and three short portraits. *Journal of Ethnopharmacology.* 48(3):145-160. http://epubs.scu.edu.au/plantscience_pubs/459. Accessed on 09/12/2013.
Ghimire, K. and Bastakoti, R. R. (2009). Ethnomedicinal knowledge and healthcare practices among the Tharus of Nawalparasi District in central Nepal. *Forest Ecology and Management.* 257(10):2066-2072. http://ac.els-cdn.com/S0378112709000644/1-s2.0-S0378112709000644-main.pdf?_tid=3d51c2f0-92dd-11e2-a5cf-00000aacb35dandacdnat=1363949148_e89a91a4e314c8e39a9523cfd4f396d7. Accessed on 20/02/2013.
Ghosh, P. K. and Sahoo, B. (2011). Indigenous traditional knowledge. *Orissa Review*. http://orissa.gov.in/e-magazine/Orissareview/2011/Jan/engpdf/66-71.pdf. Accessed on 28/03/2013.
Gurdal, B. and Kulturn, S. (2013). An ethnobotanical study of medicinal plants in Marmaris (Mugla, Turkey). *Journal of Ethnopharmacology.* 146(1):113–126. http://www.sciencedirect.com/science/article/pii/S037887411200846X. Accessed on 07/12/2013.
Iwata, J. J. (2015). *Management of indigenous human health knowledge in Tanzania* (Unpublished doctoral thesis). University of KwaZulu-Natal, Pietermaritzburg.
Kanwar, P., Sharma, N. and Rekha, A. (2005). Medicinal plants use in traditional healthcare system prevalent in Western Himalayas. *Indian Journal of Traditional Knowledge.* 5(3):300-309. http://nopr.niscair.res.in/bitstream/123456789/6906/1/IJTK%205%283%29%20%282006%29%20300-309.pdf. Accessed on 20/03/2013.
Mchombu, K. J. (2004). *Sharing knowledge for community development and transformation: a handbook.* Ottawa: Oxfam Canada.

https://www.oxfam.ca/sites/default/files/sharing-knowledge-handbook-2.pdf. Accessed on 17/01/2014.

Powell, R. R. 2002. *Basic research methods for librarians.* 3rd ed. London: Ablex Publishing Corporation.

Saunders, M., Lewis, P. and Thornhill, A. (2009). *Research methods for business students*. 5th ed. Harlow: Prentice Hall.

Sillitoe, P., Dixon, P. and Barr, J. (2005). *Indigenous knowledge inquiries: a methodologies manual for development.* Dhaka: University Press Limited.

Stangeland, T., Dhillion, S. S. and Reksten, H. (2008). Recognition and development of traditional medicine in Tanzania. *Journal of Ethnopharmacology*. 117:290–299.

Yetein, M. H., Houessou, L. G., Lougbe´gnon, T. O., Teka, O. and Tente, B. (2013). Ethnobotanical study of medicinal plants used for the treatment of malaria in plateau of Allada, Benin (West Africa). *Journal of Ethnopharmacology.* 146:154-163. http://ac.els-cdn.com/S0378874112008562/1-s2.0-S0378874112008562-main.pdf?_tid=216b0da4-92fa-11e2-a5f3-00000aacb360andacdnat=1363961557_7c9dad2457c180603ade8f4c4fa50e7c. Accessed on 20/03/2013.