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PERCEPTIONS OF SAFETY AND EFFICACY OF TRADITIONAL MEDICINES BY COMMUNITY MEMBERS IN BOTSWANA

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Abstract: *Purpose* – The purpose of this paper is to understand the perceptions and attitudes of community members towards traditional medicines, including their safety, authenticity and efficacy.

Methodology – A participatory exploratory study design was chosen, combined with a multiple approach to data collection and analysis using consultative and report-back workshops, individual interviews and focus-group discussions.

Findings – Eighty-four per cent of the community members felt that traditional medicines are safe, especially if prescribed instructions are followed. Some of the interviewees felt that traditional healers were better equipped to treat certain diseases whilst biomedical doctors were more efficient in others, hence complementary. The efficacy of traditional medicines was undoubted; however, the authenticity of some traditional healers was questioned.



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Originality – The study demonstrates the support of the community towards traditional healers and traditional medicine. This support should guide the relation between traditional healing and the formal public healthcare system.

Key words: *Traditional medicines, Traditional healers, Community members, Safety, Efficacy*

Paper type Research paper

INTRODUCTION

Botswana, a middle income landlocked country in Southern Africa, allocated, for the year 2012/13, 14.6 per cent of its Gross Domestic Product (GDP) to the Ministry of Health (Matambo 2012). This is a higher allocation than most other African countries and mainly serves to combat the persistently high HIV/AIDS prevalence rate. With this budgetary allowance, Botswana has been able to provide an almost free, quality, primary healthcare service to all its citizens, which includes free antiretroviral drugs (ARVs), vaccination campaigns and mobile clinics for rural areas. Botswana's public healthcare system consists primarily of modern biomedical formal structures including hospitals, clinics and outreach health posts and every inhabitant is situated within a 15 km radius of a health facility.

Nevertheless, many people in Botswana still seek healthcare from traditional health practitioners. This practice continues because it is ingrained in the culture, hence familiar. Access to traditional healers is in many cases easier and faster and can also be argued to be cheap and readily available. Botswana is no exception from a general trend in developing countries for which the World Health Organisation (WHO) estimated that up to 80 per cent of the population frequently uses traditional medicines due to versatility, easy access, low side effects and wide acceptance (WHO, 2002). Consequently, the WHO has appealed to countries to legally recognize traditional medicines and its practitioners.

Though globally there is a move towards the use of complementary and alternative medicines, the issue of if and how traditional medical practice should relate to the formal public health system remains a

subject of intense debate. Countries like China, India and even Bhutan have developed their traditional medicine industry to a point where traditional medicines are recognised and commercialised internationally (Shang *et al.*, 2007; Opara, 2004; Lhamo and Nebel, 2011; Gupta and Katiyar, 2012). In Botswana, the development of traditional medicines is still in the rudimentary stages and there is no legislative regulation of traditional healers and their practice. Patients go to the practitioners and are given medication that is either in the raw form such as dried leaves, roots or bark or in the form of a crude extract in water. Many traditional healers themselves complain about the erosion of standards and their unwritten code of conduct that is often violated by “fly-by-night” traditional healers who claim to be able to treat everything. However, the Ministry of Health has drafted a Traditional Medical Practitioner’s Bill which awaits approval by parliament, and recently Botswana’s Ministry of Infrastructure, Science and Technology commissioned the formulation of a National Indigenous Knowledge Systems (IKS) Policy.

However commendable these initiatives are, the view of community members who regularly frequent traditional healers and their use of traditional medicines will actually determine the future of the use of traditional medicines and how traditional healing should relate to the public health system. There are only a few studies which have actually investigated the attitudes of community members towards traditional medicine (Kaboru *et al.*, 2006; Gyasi *et al.*, 2011) and healthcare choices that communities prefer.

This paper therefore presents the perceptions of community members from four districts in Botswana towards traditional medicines, their safety and efficacy.

METHODS

Study sites

This study was conducted in four different districts of Botswana (Fig. 1), which included Central district, Ghanzi District, Kweneng District, and North East District. The study, therefore, covers a diversity of ethnic groups, including Basarwa/Bakgalakgadi in Ghanzi District, Bakwena and Bahurutshe in Kweneng-District, Bakalanga in North-East and Bangwato in Central District.

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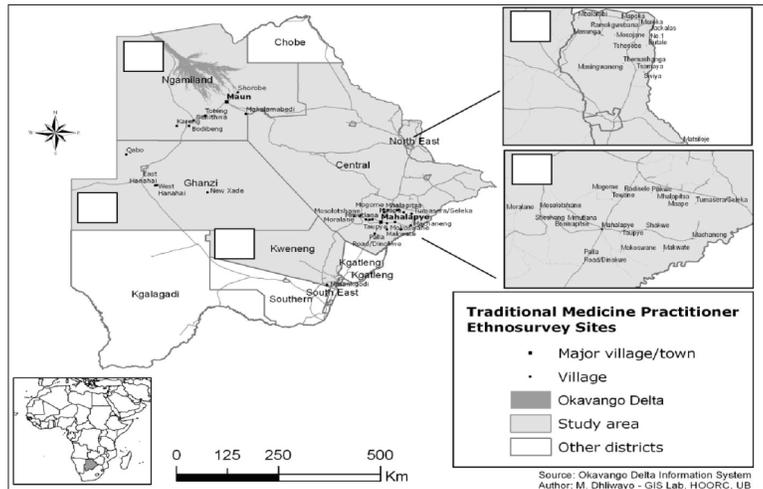


Figure 1: Study sites, Central, Ghanzi, North East and Kweneng districts

Data collection methods

Consultation and face-to-face interviews

Firstly, six consultative workshops were organized with the assistance and permission from village leaders, “Dikgosi” (chiefs), in recognition of the Setswana cultural governance systems. The purpose of these workshops was to establish a sense of trust between the researchers and the community and to create an opportunity for the researchers to inform the community about the aims of the study and possible outcomes. Secondly, face-to-face interviews (n=45) were conducted with consenting community members using semi-structured questionnaires. The interviewed community members represented a total of 12 villages, including Qabo, East-hanahai, West-Hanahai, New Xade, Mmankodi, Mogome, Mahalapye, Shoshong, Mmutlane, Mapoka, Jackalas 1, and Tsamaya.

Specifically developed questions probed the general use of traditional medicines by community members, the profile of conditions for which communities consult traditional healers and the general perception on whether traditional medicine is perceived to be effective and safe.

All the consultative workshops and interviews were conducted in the respective local languages.

Through the Ministry of Research, Science and Technology, a study permit was obtained. Community consent was obtained from the village chiefs for the consultative workshops and individual consent was sought and obtained for the face-to face interviews. All participants were informed that they could withdraw from the workshop or interview at any time.

Data analysis

Qualitative data from consultative workshops and face-to face interviews with community members were thematically analysed. Descriptive statistics were conducted for some data using Statistical Package for Social Sciences (SPSS).

RESULTS**Demographics of the interviewees**

Overall, gender distribution was fairly equal with 49 per cent female and 51 per cent male community members who were interviewed. Observationally, there was no difference in knowledge based on gender (Table 1). Most respondents to our questionnaires were within the 41-60 years (31 per cent) and 61-80 years (40 per cent) age group. Only 13 per cent of interviewees were younger than 40 years, while altogether more than half were over 60 years old. This group of respondents is more likely to have consulted traditional healers and used traditional medicines during their lifetime.

Table 1:
Demographic data
of interviewed
community
members per
district

District	Central	Ghanzi	Kweneng	North East	Total
Number of community members interviewed	10	8	17	10	45
Gender	F (7) M (3)	F (3) M (5)	F (8) M (9)	F (4) M (6)	F (22) M (23)
Age distribution	19-40 (3)	19-40 (0)	19-40 (3)	19-40 (0)	19-40 (6)
	41-60 (4)	41-60 (2)	41-60 (7)	41-60 (1)	41-60 (14)
	61-80 (3)	61-80 (3)	61-80 (6)	61-80 (6)	61-80 (18)
	81+ (0)	81+ (2)	81+ (1)	81+ (3)	81+ (6)

* One of the interviewees in Ghanzi district did not know his age.

Community consultations of traditional healers and uses of traditional medicinal plants

Ninety-five per cent (n=43) of the community members indicated that they had used traditional medicines in the past and felt that it had helped them when they were sick. We were interested in what conditions usually prompted people in their respective communities to consult a traditional healer.

Generally, respondents indicated that traditional healers were consulted particularly for ailments such as sexually transmitted diseases (STDs), “popelo” (female reproductive health-related problems), “boswagadi” (caused by having sexual intercourse with a widowed person before cleansing by a traditional healer), erectile dysfunction, “dikoto” (epilepsy), painful waist (often associated with STDs), stroke, syphilis and “badimo” (a disease that manifests with mental illness). Other general conditions mentioned by respondents for which traditional healers are consulted were “sejeso”, a form of poisoning often associated with witchcraft, eye problems, infertility, snake bites, labour pains, dizziness, menstrual cycle irregularities, body pains, fevers, migraine, swollen legs, headache, coughs, tuberculosis (TB), “phogwana” (depressed fontanelle), knee problems, heart problems, diarrhea, high blood pressure, miscarriage, child born with illnesses, digestive problems, urinary tract problems, broken limbs, blood-related diseases, asthma, tonsil problems, kidney problems, chest pains, lumps and “khujwana” (improper healing of the umbilical cord).

The respondents provided information about a wide variety of medicinal plants that treat ailments, except for three respondents from Ghanzi district aged 88, 76 and 74 years and one female aged 28 years, who stated she was Christian and does not use traditional medicines.

Respondents named a total of 32 plants used to treat 26 different ailments in Ghanzi District, 22 plants for treating 20 conditions in Central District, 33 plants for 22 conditions in Kweneng District and 36 plants for treating 35 conditions in North East District. Respondents were knowledgeable in the use of herbs for specific conditions. Some plants were mentioned as being useful in treating more than one condition. Participants mentioned that most remedies were prepared by boiling of plant parts to make an infusion, burnt and the smoke was inhaled or ground and topically applied.

Given the high HIV/AIDS prevalence rate in Botswana, we were interested to know whether community members would have knowledge about traditional medicines, which are considered as helpful in their respective communities. Only four respondents stated they had knowledge and two plants were cited as useful in treating HIV/AIDS. Three respondents indicated no knowledge of plants that can be used for treating HIV/AIDS.

Community perception of efficacy of traditional medicines

Based on the initial statements by community members confirming their consultations with traditional healers, we wanted to know how they thought that traditional medicines help patients with certain conditions.

For this, 78 per cent (35/45) of the participants responded, and their statements could be grouped into five categories as follows:

The first category, hereafter referred to as the majority (20/45) responded that “*traditional medicines are very helpful*”. The second category of respondents (8/35), compared traditional medicines to modern medicines. Some verbatim responses included the following statements:

“It really helps a lot because there are certain diseases that they [the traditional healers] treat better than the hospital”

“It really helps a lot compared to modern medicine”

“Traditional medicines can heal diseases that medical doctors can’t heal”

Consequently, in most community member’s opinion both health systems should be used, which is exemplified in the following statement:

“[Traditional medicines] do heal but not always, for some diseases one should go to the clinic”

These responses resonated with feedback from consultative workshops where participants had been asked what their first choice of health-seeking would be – to consult a traditional healer, a biomedical doctor or both. Opinions varied slightly, but most participants stated that they use both systems depending on the nature of the health condition. Some participants indicated preference of traditional healers for non-acute conditions and when the clinic outcome is poor. Participants also noted that there are

some illnesses including “badimo” and “popelo” that cannot be cured by biomedical doctors. However, it was acknowledged that the clinics can treat a certain range of diseases including complicated ones like HIV/AIDS or TB.

Another category of respondents to the questionnaire placed the use of traditional medicines in a socio-legislative context, emphasizing that,

“[Traditional medicines] are very helpful but we are afraid of the law”
“Traditional medicine is helpful, people get healed. But traditional medicine is discouraged and so I am not free to open up, this feels like a trap”

Furthermore, people were concerned that knowledge of traditional medicine is not being passed down properly to the younger generations:

“Traditional medicines are helpful if you know how to use them”
“Some traditional medicines do work, the problem with ineffectiveness of traditional medicines is the lack of skills of some traditional doctors, but yes the traditional medicines do work and help people in different ways”

Although only two respondents expressed this concern, it indicates that there is a gap in passing on knowledge.

Some of the respondents felt that traditional medicines do not work. Some of the responses from these respondents were:

“The main problem is that there are doctors today, who are not what they claim to be”
“Today unlike in the olden days, they just lie to patients, their medicines are not helpful” (stated by an 88 year old woman)
“It doesn’t help any more”

However, even the interviewees who are very critical of traditional medicine use today acknowledged that they might have been useful in the past.

All in all, 83 per cent of community members emphasized that traditional medicines do help in healing/managing diseases. Six per cent stated that they help in some cases, while 11 per cent believed that traditional medicines are not useful in managing health problems.

Community perceptions on the safety of traditional medicines

From our interaction with communities and public health workers we noted that nurses and health educators at local clinics were sceptical about the safety of traditional medicines and regularly communicate this concern back to community members. We therefore tested the opinion of community members with regard to the safety of traditional medicines.

A large majority, 84 per cent of the respondents (n=38), felt that traditional medicines were safe for use, but acknowledged that as with all medicines, observation of a correct treatment regime is necessary. For example, three respondents who felt that traditional medicines are safe, commented as follows:

“if you do not follow instructions you may end up dying”
“people are selfish nowadays and they want money so they can fake being a traditional doctor and end up giving the wrong medicines”

However, it was noted that even the respondents who felt that traditional medicines were no longer helpful, still indicated that traditional medicines were safe to use.

Only two respondents felt that traditional medicines had risks, with one respondent particularly citing environmental related contamination:

“Things have changed such as climate and environment. Chemicals all over may change the being of plants and this can cause them to be dangerous”

At this point, it should be noted that concerns about the safety of traditional medicines are not related to the medicines as such, but to external factors like maldosage by patients, malpractice by fake healers and a changing environment.

DISCUSSION

Traditional medicine is effective

Generally, community members were knowledgeable in the use of plants as traditional medicines. The high number of different plants mentioned, the broad range of ailments stated and the ability to indicate preparation modes and treatment regimens involving medicinal plants point to

detailed knowledge, which shows the persistent reliance of traditional medical practice in communities and the appreciation of its efficacy. This is augmented by the fact that 95 per cent of the respondents positively responded when asked if they had ever consulted a traditional healer and by the overwhelming majority of statements that traditional medicine is effective. This is in agreement with other studies that indicate that the consultation of traditional healers by community members is favoured because it is embedded in their socio-cultural context (Peltzer *et al.*, 2008).

Furthermore, it can be inferred that all social groups, men, women and children do consult traditional healers, which confirms the perceived positive benefits of consulting them. Gyasi *et al.* (2011) noted that the consultation of traditional healers, even though culturally related and effective, may also be attributed to the close proximity of the traditional healers compared to healthcare facilities, which is particularly true for rural areas. 17 per cent (8/45) of community members interviewed thought that traditional medicines are more effective than the modernized medicine. As a consequence, some community members argued for the availability of both healthcare systems, which has also been reported in other studies (Stekelenburg *et al.*, 2005). One medicinal plant, “sengaparile” (Devil’s Claw) was mentioned by community members in all districts. Its medicinal effects cover a wide range of applications. This aligns to the use of sengaparile on international markets for the treatment of arthritis and various ailments. The German market in particular imports the dried plant tuber from South Africa, Botswana and Namibia and exports are in the range of a million dollars (Stewart and Cole, 2005).

Traditional medicine is safe

Remarkably, community members, including the ones who are sceptical of the contemporary use of traditional medicines, conceptualised the safety of traditional medicines in a strong contextual manner. Over 80 per cent of the respondents indicated that traditional medicines are safe to use if one follows the prescribed treatment regime. However, some respondents cautioned that, firstly, medicinal plants might be subjected to a changing environment and may lose their efficacy, and secondly, the efficacy of traditional medicines is being compromised by fraudulent “practitioners” who use persisting health challenges in the country as a business opportunity within the cash-economy. Important themes emanate from these statements: Firstly, the necessity to validate the

authenticity of traditional healers to ensure the safety of patients and to make sure that only authentic traditional healers train the younger generation to ensure continuity of good traditional medical practices, and secondly, to put more attention on research into the bioactivity of traditionally used medicinal plants in relation to their original, local habitat and potential modulation of bioactivities as a consequence of climate change.

Factors that shape knowledge-sharing

During our interaction with community members, we experienced on a face-to-face level how modern life has shaped and continues to shape traditional medical knowledge exchange. For example, in Ghanzi District, three community members aged 74, 76 and 86 years stated they had no knowledge of plants used as traditional medicines. As the older generation is expected to be in possession of indigenous knowledge, one could guess that these respondents do not want to share the indigenous knowledge possessed or that this area is considered specialized to traditional doctors. Similarly, in the Central District, only half of the respondents indicated having knowledge of plants used as traditional medicines.

Several factors may contribute to this: either the interviewees do not possess this indigenous knowledge, which is rather unlikely, or just did not want to share it. Several respondents in this district refused to be interviewed if there was no remuneration. This may suggest that community members are sensitized to the global value of indigenous knowledge and rightfully want to be paid to share that knowledge. Thirdly, the hesitation to share traditional medical knowledge may be a consequence of fear and stigma due to the lack of legislative recognition of traditional healers and their practice, as mentioned by some interviewees. In relation to this, one might understand the low rate of responses of four interviewees out of 45 who indicated that there are medicinal plants useful for the management of HIV/AIDS. Ironically, the lack of a proper legislative status of traditional healers might be one of the major factors promoting the emergence of “fake” healers, who were bemoaned by interviewees. One respondent aged 28 years stated she is a Christian and therefore does not use traditional medicines and has no knowledge of the names of the plants and their uses. This case reflects the history of missionaries and churches in Botswana that regarded and sometimes continue to regard traditional healers as heathens and banned all Christians from participating in African rituals and consulting

with traditional healers. In addition, as this respondent is of a younger generation, the gradual erosion of culture with modern practices of adopting other cultures, which do not necessarily subscribe to traditional medicine practices, could have resulted in the fact that the respondent possessed no knowledge of traditional medicine profiles and uses.

On the other hand, the youngest community member interviewed (19 years) was very knowledgeable in the area of traditional plants, mentioning 11 plants used for medicinal purposes. This might be an indication that there is still a transfer of indigenous knowledge from the older generation to the younger generation and also emphasises the acknowledgement of the importance of this type of knowledge and thereby the need to preserve it.

CONCLUSION

Consultation of traditional healers was found to be a common community practice associated with a positive attitude towards efficacy and safety, though traditional healing generally takes place in an atmosphere of insecurity and fear as there is currently no legal recognition of the profession in Botswana. Community members suggest the usefulness of a dual healthcare system that should allow for multiple healthcare choices depending on the type of condition for which the expertise of local clinics and traditional healers differ. Based on these findings, the need to have a comprehensive national policy on the use of traditional medicines is necessary, focusing on validation of the authenticity and expertise of traditional healers and a collaborative framework of traditional healing and public health systems that allows multiple healthcare choices and guidelines that allow complementary scientific characterization of traditional medicines in addition to valuable patient observations by traditional healers.

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ABOUT THE AUTHORS

Harriet Okatch is an analytical chemist pursuing research in HIV/AIDS-related areas. Some of her specific research projects include an ethnosurvey of traditional medicines utilized in the treatment of HIV/AIDS and opportunistic infections in Botswana, analysis of heavy metals and pesticides in these medicines, and development of analytical methods to determine ARV concentrations in plasma samples.

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Dr Kerstin Andrae-Marobela is a molecular cell biologist at the Centre for Scientific Research, Indigenous Knowledge & Innovation (CesRIKi) at the University of Botswana (UB). Her research focuses on indigenous-knowledge (IK)-based science platforms in relation to infectious diseases. She interacts closely with traditional healers and their communities for purposes of culture-sensitive documenting and understanding the dynamics of traditional medical knowledge. She has developed a plant bioactivity screening programme as a participatory tool to build successful collaborations between scientists and traditional healers, as well as a tool to bridge the gap between IK and formal science education at universities.

Ms Keitseng Monyatsi holds a Master's degree in intellectual property (IP) and currently works for the African Regional Intellectual Property Organization (ARIPO). She has gained special experience on IP rights issues related to indigenous knowledge due to extensive fieldwork with indigenous knowledge holders and their communities in Botswana. Her special interest lies in working at the interface of IP, indigenous knowledge systems and economic development.

Dr Audrey Masizana-Katongo is a computer scientist and has been involved in the creation of indigenous knowledge databases. Recently, she developed a new concept of "expert systems" in relation to traditional medical knowledge. Contrary to classical input-output-based databases, an "expert system" can store intermediate steps that lead to certain conclusions. She currently tests applications of this "expert system" on storing information on traditional healer's diagnostic steps culminating in a final patient diagnosis.

Professor Barbara Ngwenya is a cultural anthropologist whose research interest is in the area of indigenous knowledge systems and their importance towards community livelihoods. Her research involves

World Sustainable Development Outlook 2012 extensive interactions with communities in Botswana exploring indigenous knowledge-based coping strategies in relation to climate change, depletion of natural resources and disease burden, such as HIV/AIDS.

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