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## EMBRACING HERBAL MEDICINE THROUGH COLLABORATION AMONG TRADITIONAL HEALERS, BIOMEDICAL HEALTH PRACTITIONERS AND RESEARCH INSTITUTES: A REVIEW

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### ABSTRACT

There are nearly 200 000 traditional health practitioners practicing in South Africa catering for approximately 80 percent of the country's population that is thought to use traditional medicine for their physical and spiritual well-being. The cumulative occurrence of diseases of unidentified etiology, customary beliefs and fatal diseases has led to traditional healer's assisting more patients. In many countries, collaborative initiatives between traditional African medicine and western medicine are taking place at a national level. However, in South Africa traditional healers are not formally recognized as health care professionals. Traditional and allopathic health practitioners experience negative attitudes towards each other and very little effort has been executed to incorporate westernized medicine and traditional healing. The main problem is the way to instigate corporation between traditional healers and Western biomedicine which vary in theory of disease management and causation. The purpose of this paper was to assess and address problems adjourning incorporation of traditional and biomedical practitioners, while recognizing opportunities and contemporary initiatives or interventions. Recommendations were provided on how to facilitate collaboration of traditional healers into recognized health care system and research developments to reduce the risks of their practices.

**Keywords:** Biomedical practitioners, collaboration, traditional healers, traditional medicine, research institutes.

### INTRODUCTION

Indigenous knowledge is engrained in the spiritual and cultural lives of most Africans. Due to various reasons including cultural compatibility, accessibility to healthcare, cost of healthcare services, traditional healers remain very popular across the world and are the main provider of health care in emergent countries (Essandoh, 1998; Merriam and Muhamad, 2013). In South Africa, there are approximately 200 000 practicing traditional healers with some researchers proclaiming as high as 400 000 (Pefile, 2005; Dine *et al.*, 2009; McFarlane, 2015), and 70 to 80 percent of the population is thought to consume traditional medicine for their physical and spiritual well-being (Lange, 2018; Street *et al.*, 2012; Latif, 2010). This number reflects a great demand for their services and demonstrates they are and will continuously be part of the community for many decades if not centuries (Peu, 2000). The utilization of traditional medicine is a common practice in South Africa; traditional health systems are mostly essential in rural areas where access to proper and economical primary healthcare is difficult and, at times, near unattainable (Pefile, 2005). In sub-Saharan Africa, the ratio of traditional healers to the population is nearly 1:500 000, whereas medical doctors presents a 1:40 000 ratio to the remainder of the population. These two ratios mean there are approximately 80 times more traditional healers than biomedical doctors (Hassim *et al.*, 2007).

The escalating occurrence of diseases of unidentified etiology and fatal diseases, including AIDS and cancer has resulted to traditional healers helping more patients who are continually disgruntled with modern medicine (Bereda, 2002; Mbwabo *et al.*, 2007). Millions of people in South Africa and across the continent make use of traditional health care practices and approaches rather than or additionally to biomedicine (Hassim *et al.*, 2007). For this reason, in many countries collaborative initiatives on a national level are taking place, in most cases, the Government of the country concerned taking responsibility (Peu, 2000). However, in South Africa traditional healers are not formally accepted as health care professionals (Latif, 2010), they do not obtain necessary education in allopathic medicine and do not obtain any indorsed qualification in their specialized fields.

A study undertaken by Van Rooyen *et al.* (2015) indicated that allopathic and traditional health practitioners exuded generally unfavorable attitudes towards each other. The main problem is the way to initiate cooperation between traditional healers and Western biomedicine which vary in theory of disease management and causation (Kayombo *et al.*, 2007). Merriam and Muhamad (2013) emphasized that we need a solid awareness of the contribution and practices of traditional healers so that health practitioners in both systems can better address and improve patient healthcare, especially with reference to life-threatening chronic diseases.

Given the increasing popularity of traditional medicine globally, it is crucial that medical and other healthcare professionals collaborate with traditional healers to comprehend traditional medicine practices and products (Busia and Kasilo, 2010). The fact that patients use modern and traditional health-care concurrently calls for an improved information flow between practitioners of both medicines (Hillenbrand, 2006). A method to coordinate activities between modern and traditional medicine will promote a transparent understanding of the strengths and weaknesses of each, and encourage development of the most effective medicinal option for patients (WHO, 2000). Such collaborations will enable the assessment of the quality, safety and effectiveness of the plant medicinal products and initiate the production of traditional medicines validated through research and academic institutions (Busia and Kasilo, 2010). The purpose of this paper is to evaluate and address problems delaying incorporation of traditional and biomedical practitioners, while recognizing opportunities and contemporary initiatives or interventions. Additionally, encourage collaboration between traditional healer's and research institutes to review the effectiveness of traditional medicines.

### **Contribution of traditional healers in basic medical care**

Traditional health care and traditional healers have been part of African communities and cultures throughout their history (Ehlers, 2000). The bible also quotes the usage of herbs and records the use of herbal medicine as far back as Ancient 2 Egypt (Sebata, 2015).

Traditional healers play a major role in community life. Their dominant role is to provide health care for their patients (Peu, 2000) offering curative herbal remedies and therapies (Sebata, 2015). When illness affects most South Africans, traditional health practitioners are the first to be called for help, their communities have confidence in their ability to cure or relieve medical conditions (Van Niekerk, 2012). Traditional health practitioners apply effective remedies through knowledge of medicinal herbs. The discovery of the healing properties of medicinal plants such as the *Salix nigra*, *Siphonochilus aethiopicus*, *Harpagophytum procumbens* and *Tabernanthe iboga* emerged from the knowledge of traditional health practitioners (Magoro *et al.*, 2010). A study conducted by Puckree *et al.* (2002) revealed that 70% of the patients would consult traditional health practitioners as a first option for potentially life-threatening conditions. Thus, the role that traditional healers and traditional medicine should play in primary health care ought to be carefully defined.

### **Why do people favor traditional services instead of Western biomedicine?**

Traditional health care use dates back to the late nineteenth century, the era of colonization, Christianization, and the emergence of capitalism (Meissner, 2009). Traditional healing is one of the most significant aspects of Africa's cultural heritage; most Africans who have not become divorced from their cultural heritage have a deep respect for traditional healers (Peu, 2000). As a result, traditional African medicine is profoundly ingrained in indigenous life across the continent and indigenous societies prefer such treatment over Western medicine (Sebata, 2015). Modern health care system has several shortcomings; they are often not accessible and/or culturally obsolete and

inadequate to handle the variety of diseases that exist in the African population (Meissner, 2009).

Communities tend to continue to pursue traditional support rather than modern medicine because of cultural values, holistic practices, a common value system and lack the lack of rural hospitals (Latif, 2010). Traditional health care is community-based, with its own recognized and trusted healers, and people favor traditional counselors and healers with common cultural beliefs (Bhikha and Glynn, 2013). Traditional healers often have high degree of reputation and deep respect among the people they serve. They are familiar with local care services, as well as people's physical, emotional and spiritual lives and can influence behaviours (Richter, 2003). In the main, African traditional healers have provided cheap, more affordable and accessible health care services within their communities, particularly in the rural areas where Western medicine could not reach due to inadequate human and material resources of the African governments (Omoleke, 2013; Hassim *et al.*, 2007; Peu, 2000; Sebata, 2015; Meissner, 2009; Nyika, 2007). Traditional healers use compassion and reassurance by keeping vulnerable clients/patients in their homes, when institutions such as hospitals turn them away to await death at home (Bereda, 2002).

### **Constraints hindering the merger of biomedical and traditional practitioners**

South Africa has two systems of health care, like most African countries however the Westernized hospital and/or clinic based treatment of diseases is the most evident (Ehlers, 2000). Traditional healers can receive a license to practice in South Africa, but very little planning has been done to combine westernized medicine with traditional healing. The real contribution of traditional healers to health care in South Africa is unknown (Puckree *et al.*, 2002). As noted earlier, South Africa is lagging behind other African countries in the recognition of traditional medicine and in the establishment of structures for traditional medicine and traditional healers (Richter, 2003). Current collaborative discussions seem to have generated flexibility from the traditional health practitioner's side, but biomedical practitioners are still skeptical of traditional medicine (Komolafe, 2007). The public and scientists/biomedical health practitioners are genuinely concerned about the effectiveness, safety and quality of traditional medicines (Mbwambo *et al.*, 2007).

Van Rooyen *et al.* (2015) highlighted three major critics expressed by biomedical health practitioners towards traditional health care. One of the reasons mentioned was the non-scientific methods used by traditional health practitioners to treat patients. They claim that traditional practices are very barbaric and uncivilized, since they are not scientifically based (Bereda, 2002). A second factor that leads to a pessimistic mindset is the interference of traditional healers with the effectiveness of hospital treatments. Lastly, they indicated that traditional healer's delays in transferring patients to the hospital (Nemutandani *et al.*, 2016; Van Rooyen *et al.*, 2015). Not going to the hospital in due time has many consequences such as a high rate of death, a high level of pain and suffering because of the progression of the disease and a significant loss in their chance for recovery (Ly, 2018).

In South Africa, several factors inhibit effective collaboration between traditional and biomedical health

practitioners. In a study conducted by Hlabano (2013), biomedical health practitioners stated that traditional healers use expired medicines, give improper dosages, lack accuracy of the diagnosis (Ly, 2018; Bereda, 2002) and keep poor or no records at all. They also fear that their patients will be treated with 'untested' herbal drugs, leading to more deaths, drug overdose, renal failure and drug resistance (Nemutandani *et al.*, 2016). In Hlabano (2013) thesis, traditional healers stated that they have encountered mistrust and disrespect from biomedical health professionals who have displayed ignorance in traditional medicine. In most cases, traditional healers observe collaborating with biomedical health practitioners in research initiatives as exploitative. In a study undertaken by Campbell-Hall *et al.* (2010) traditional healers reported a lack of appreciation/respect from Western health care practitioners but were open to training in Western biomedical methods and developing a collaborative partnership to improve patient care. However, Western biomedical qualified practitioners were less interested in such partnership.

In several developed countries, training and licensing of healers is not institutionalized, making it difficult to train them consistently in a standardized manner (Zimba, 2014). Although there is an increasing number of collaborative initiatives, there seems to be a wide range of challenges facing collaborative projects and thus threatening the sustainability of such efforts or initiatives (Hlabano, 2013).

#### **Current state of development: documented collaborative initiatives in South Africa and other countries**

Collaboration means developing mutual understanding through dialogue, knowledge exchange and resources in a mutually negotiated agreement between the two systems for the mutual benefit of their patients (Kayombo *et al.*, 2007; Hlabano, 2013). While obstructions exist, there are opportunities for cooperation, including extensive infrastructure of traditional medicine, openness to collaboration, and public initiatives (Krah *et al.*, 2018).

#### **Current initiatives in South Africa**

Despite some unresolved issues pertaining, amongst others, registration and standardization, there is increasing cooperation between the westernized and the indigenous systems in South Africa (Steyn and Muller, 2000). The Human Sciences Research Council (HSRC, 2009) declares that South Africa has made efforts to improve collaboration between traditional and biomedical health practitioners. There have been accomplishments and several ongoing projects that seek to integrate traditional health practitioners in the strategic planning process and management of South African health-related concerns (Table 1).

The South African government has made substantial efforts to accept traditional medicine and try to integrate the traditional medicine field into the national health care system through the creation of Traditional Health Practitioners Act 22 of 2007 (Peltzer *et al.*, 2006; Magoro *et al.*, 2010; Mothibe and Sibanda, 2019). The current body of evidence indicates a great deal of change in the way that traditional healing is perceived in South Africa, having moved from a deprecating 'witchcraft paradigm' to a more accommodating and reconciliatory 'healing paradigm' now covered under the Traditional Health Practitioners Act (22 of 2007) (Moshabela *et al.*, 2016; Mbatha *et al.*, 2012). Despite all these important

attempts, Mototo (1999) highlighted that out of nine provinces in South Africa, KwaZulu Natal is the only province where traditional healers gains acceptance by the government.

#### **Collaborative initiatives in other countries**

Not all countries have a distinct and large number of biomedical practitioners participating in traditional practices however; several countries have begun to include traditional practitioners in their national health care systems (Table 2). At least five African countries, namely Zimbabwe, Liberia, Ghana, Nigeria, Sierra Leone and Botswana have undertaken some efforts to include traditional practitioners in their national health care systems (DeJong, 1991). Countries such as Ghana, Nigeria and Kenya have introduced traditional medicine into the curriculum of specialist institutes and university departments. Ghana has made remarkable efforts to incorporate herbal medicine into the national healthcare system. Krah *et al.* (2018) listed some of the existing organized efforts; examples include the Ghanaian NGO Association of Church-Based Development Projects has distributed mobile devices to healers in an attempt to increase communication and referral rate. Also, there is collaboration between one district hospital and a bone setter. After taking X-rays the hospital usually sends the patients to the healer; the healer will interpret the X-rays and treats. Correspondingly, the healer will refer patients with open wounds to the hospital, where drip and pain killers can be given.

Like other African countries such as Ethiopia, Ghana, Mali, Nigeria, Niger, Senegal and Zaire (Bereda, 2002), South Africa should also instigate an official working relationship, give traditional healers authority and legal power to work with biomedical practitioners in health care provision. It is vital for community health practitioners to accommodate traditional healers and traditional medicine in South Africa with the kind of accommodation that has already been proved to be effective in other countries (Peu, 2000).

#### **Collaboration between traditional healers and research institutes**

Local people who are directly and indirectly interested in the medicinal plant industry should combine their expertise with scientific knowledge in order to achieve the conservation and livelihood development objectives (Pondani *et al.*, 2016). Traditional health practitioners understand the socio-cultural context of the community they service. However, there is disapproval attached to their practice in that they do not have the academic and empirical knowledge of medicine (Latif, 2010). Some work has been done on traditional healer's practices and the use of medicinal plants in African universities, but it seems insufficient (Mohamedbhai, 2013).

Increasingly, research institutions in Africa and the rest of the world are interested in natural plant product research (Latif, 2010). Research will ensure the accountability, safety and effectiveness of the medicines. Many African institutions have adopted the participation of traditional practitioners in the collection of medicinal plants and experimental studies to develop trust between scientists and traditional practitioners (Makhubu, 2006). A study conducted by Ramchundur and Nlooto (2017) showed that most traditional healers were

willing to collaborate with researchers to improve their traditional medicines. Over the last decades, conducting research on medicinal plants and promoting their conservation have become more complex (Martin, 2014). Investment in the cultivation of most popular medicinal plant species must be made in order to reduce the reliance of the medicinal plant industry on wild plant stocks. Research should identify sustainable harvesting strategies and high yielding varieties (Manzini, 2005).

The World Health Organization recommends collaborative efforts between academic researchers and traditional healers; a relationship which remains insubstantial (Ramchundar and Nlooto, 2017). Government is working with the Medical Research Council (MRC) and the Council for Scientific and Industrial Research (CSIR) to test traditional medicines. The CSIR collaborates with traditional healers to establish experimental protocols to assess the efficacy and toxicity of traditional medicines, based on the preparation and administration of these medicines by the healer (Hassim *et al.*, 2007). Furthermore, African Research Council (ARC) is also starting to work with traditional health practitioners to assist them in small-scale cultivation. The Medicinal Research team partners with universities that conduct plant research in order to develop propagation and cultivation capability to create a sustainable supply of plant materials (Atalanta Consultation, 2012). Med Plant is also a research initiative which explores the development and sustainable use of medicinal plant diversity, bringing together research institutions, private companies and non-profit organizations to explore new interdisciplinary methods and technologies (Martin, 2014). Greater collaboration between traditional health practitioners and scientists will enhance insights into the use, preparation, therapeutic possibilities, and pharmaceutical make-up of these medicinal plants. In this way, traditional knowledge and science will interconnect in new and original ways (Aboyade *et al.*, 2014).

### RECOMMENDATIONS

In assessment of what has been discovered above with concern to gaps between traditional healers and biomedical practitioner's/researcher's practices, it is proposed that a collaborative framework should be established. The following few suggestions can be utilized to bring about such collaboration. Firstly, in order to initiate cooperation between the practitioners of the two disciplines and research/academic institutes it is vital to create awareness about each other's fields and practices. Precisely, practitioners from both fields

need to be provided with resources updating them about the concepts of the other sector. This can be achieved by means of lectures, workshops and conferences, where they can share their considerations and skills.

Research and academic institutes should conduct research on the effectiveness/healing properties of the herbs frequently used by traditional healers for management and treatment of various ailments. Additionally, promote written documentation and studies on traditional medicine practices in order to preserve indigenous knowledge, this will ensure the use of nontoxic, efficient and quality products based on the available empirical evidence. Collaboration between traditional healers and research/academic institutions could also promote cultivation of medicinal plants and assist with the botanical identification of species collected by the traditional healers. Lastly, it is further recommended to empower biomedical health practitioners to acknowledge and understand patients' beliefs in traditional medicine; take healers seriously and treat them as fellow professionals. This relationship might lead to the early discovery and early management of various chronic diseases without patients having to choose between the two systems.

### CONCLUSION

In South Africa, traditional healers bear most of the burden of health care, especially in rural areas therefore an intensive effort should be made to include them into the health care system. Even though traditional healers play a significant role in many communities, their services are often unaccepted by the contemporary health care system and still being debated and contested. Modern medicine has spent an enormous amount of money endeavoring to treat and possibly cure major health ailments with potent drugs but, unfortunately with only partial success. For these reasons, this paper argues that traditional and biomedical health systems should be integrated as an operative and sustainable way of increasing and improving South African healthcare system. It is indispensable to introduce channels of collaboration and communal understandings between traditional healers, biomedical health professionals and research institutions in South Africa mainly in areas where most people first consult traditional healers. Cooperation between biomedical practitioners and traditional healers could help in the early discovery and management of diseases; end harmful methods of practice such as consultation in an unhealthy, non-hygienic environment, misdiagnosis and negligence.

**Table 1 :** Projects instigated to integrate traditional healers into the Health care system

Project name	Abbreviation	Project information	References
National Reference Centre for African Traditional Medicines	NRCATM	Initiative by the Department of Health; obtain and synthesis information to promote, regulate and register indigenous medicines.	Le Roux-Kemp, 2010; Pefile, 2005
Medical Research Council	MRC	Medical research unit to evaluate the safety and effectiveness of TM	Mothibe and Sibanda, 2019
Council for Scientific and Industrial Research	CSIR	Evaluate TM, design experimental protocols to determine their effectiveness and toxicity.	Mothibe and Sibanda, 2019; CSIR, 2011
Traditional Healer's Organisation	THO	Arrange TH's workshops, focusing on issues of health, HIV & related diseases, award TH's with certificates to give credibility.	Richter, 2003; Tyilo, 2019
AIDS Foundation South Africa	AFSA	Supports HIV and AIDS education for TH's and recognizes that they are well placed to educate people and provide counseling.	AFSA, 2019; Mbatha <i>et al.</i> , 2012; Van Niekerk, 2012
African Medical and Research Foundation	AMREF	Biomedical and TH's collaboration on HIV project; implemented a replicable approach for integrating health	Mbatha <i>et al.</i> , 2012; Sivhaga <i>et al.</i> , 2012

Valley Trust	Unknown	systems. Collaborate with TH's to promote community wellness, experiential training curriculum and successful candidates receive certificates as qualified Community Health Worker	Van Niekerk, 2012
University of KwaZulu-Natal	UKZN	Has a THP on its staff and student counselling and wellness program, provided training on prevention and palliative care	Street <i>et al.</i> , 2012; Gomo, 2016; Mbatha <i>et al.</i> , 2012; Bomoyi and Mkhize, 2016
National Department of Health	DoH (SA)	Developed strategies to institutionalize and regulate THP's, recently conducted a national roadshow to explain Act 22 to THP's	De Roubaix, 2016
African Research Council	ARC	Assist THP in small-scale cultivation	Mothibe and Sibanda, 2019

TM = Traditional medicine; TH = Traditional Healer; THP = Traditional Health Practitioner

**Table 2 :** Current state of development in other countries

Country	Integration Efforts	Effort information	References
America	Boston's Beth Israel hospital	Alternative practitioners reached an agreement with the biomedical personnel about the best treatment method to use in resolving patients health problems.	Anon, 1994
Britain	England's St Mary's hospital	Biomedical practitioners work with alternative health care practitioners to treat psychiatric patients.	Pinkoane, 2005
China	Traditional medical hospitals	2500 traditional medical hospitals with units for TM doctors; provide both traditional and conventional medicine. Medical school curriculum incorporates traditional health care compulsorily.	Bereda, 2002; Peltzer <i>et al.</i> , 2006
Nigeria	Traditional medical center; clinical facilities	Traditional medical center was established for training and licensing of TH's. Clinics- TH's use stethoscopes, keep record cards and adopt practices like dressing in white coats.	DeJong, 1991; Pinkoane, 2005; Peu, 2000
New Zealand	Government initiative	More than 600 Maori TH's have been legalized to work with the biomedical personnel- permission granted by government.	Pinkoane, 2005
India	Central Council of Indian medicine	2860 hospitals providing traditional systems & 221000 dispensaries of TM.	Mafuva and Marima-Matarira, 2014
Zimbabwe	Registry of practitioners treating HIV/AIDS; University of Zimbabwe	Physicians refer people with HIV/AIDS to TH's who have registered with ZINATHA. The University of Zimbabwe offers courses leading to the award of a Bachelor of Science degree in Natural Medicine.	Tagwireyi <i>et al.</i> , 2002; Mafuva and Marima-Matarira, 2014
Kenya	Institutes of alternative medicine	Established school of Alternative Medicine and Technology in Karati and an Institute of Complementary and Alternative Medicine in Nairobi.	WHO, 2003
Ghana	Kwame Nkrumah University of Science and Technology (KNUST), Ghana's Ministry of Health, district hospital	Bachelor's degree program in herbal medicine at KNUST, District hospital frequently sends patients to the healer after taking X-rays while healers refer patients with injuries to the hospital.	Appiah <i>et al.</i> , 2018; Krah <i>et al.</i> , 2018

TM = Traditional medicine; TH = Traditional Healer

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## REFERENCES

- Aboyade, O.M.; Styger, G.; Gibson, D. and Hughes, G. (2014). *Sutherlandia frutescens*: The Meeting of Science and Traditional Knowledge. *J. Altern. Complement. Med.*, 20: 71–76.
- AIDS Foundation of South Africa (2019). Traditional medicine, culture and health. <http://www.aids.org.za/> page/traditional-medicine-culture-and-health,14 August 2019.
- Anon (1994). Drugs and backrubs. Science and technology. *The Economist*. 93–94.
- Appiah, B.; Amponsah, I.K.; Poudyal, A. and Mensah, M.L.K. (2018). Identifying strengths and weaknesses of the integration of biomedical and herbal medicine units in Ghana using the WHO Health Systems Framework: a qualitative study. *BMC Complement. Altern. Med.*, 18: 286.
- Atalanta Consultation cc. (2012). Research study to identify needs, opportunities and challenges of small and medium enterprises in the traditional medicine sector. Final Report.



- Bereda, J.E. (2002). Traditional healing as health care delivery system in transcultural society. M.Sc. thesis, University of South Africa. South Africa.
- Bhikha, A.H. and Glynn, J. (2013). African traditional healing and Tibb. A science of medicine: The Art of Care. Tibb Institute.
- Bomoyi, Z.A. and Mkhize, N. (2016). Incorporating African Indigenous Healing into the Counseling Services in Tertiary Institutions: A Preliminary Exploration. *Alternation J.*, 18: 118–147.
- Busia, K. and Kasilo, O.M.J. (2010). Collaboration between traditional health practitioners and conventional health practitioners: Some country experiences. *Afr. Health. Monit.*, 13: 40–46.
- Campbell-Hall, V.; Petersen, I.; Bhana, A.; Mjadu, S.; Hosegood, V. and Flisher, A.J. (2010). Collaboration between traditional practitioners and primary health care staff in South Africa: developing a workable partnership for community mental health services. *Transcult. Psychiatry.*, 47: 610–628.
- Centre for Scientific and Industrial Research (CSIR)(2011). The CSIR and Afriplex- partners in bridging health solutions. <http://www.csri.c.za/csir-and-afriplex-partners-bringing-health-solutions>, 14 August 2019.
- DeJong, J. (1991). Traditional medicine in sub-Saharan Africa: Its importance and potential policy options. Population, Health, and Nutrition Working Papers. Washington, DC: World Bank.
- De Roubaix, M. (2010). The decolonialisation of medicine in South Africa: Threat or opportunity?. *S. Afr. Med. J.*, 106: 159–161.
- Dine, J.L.; Schneider, M.K.; Stewart, B.R. and Armer, J.M. (2009). Learning from traditional healers in South Africa. *J. Lymphoedema.*, 4: 10–16.
- Ehlers, V. (2000). Nurses as advocates between western and traditional wealth practices in RSA. *Health. SA. Gesondheid.*, 5: 29–36.
- Essandoh, P.K. (1998). Perspectives from Sub-Sahara Africa. In: Belleck, A.S., Hersen, M. (Eds). *Comprehensive clinical psychology: Sociocultural and individual differences*, Elsevier Science Ltd, pages. 357–364.
- Gomo, E. (2016). Traditional medicine in the academy is a reality. Mail & Guardian. <https://mg.co.za/article/2016-10-07-00-traditional-medicine-in-the-academy-is-a-reality>, 18 April 2018.
- Hassim, A.; Heywood, M. and Berger, J. (2007). Health & Democracy: A Guide to Human Rights, Health Law and Policy in Post. *S. Afri. J. Hum. Rights.*, 23: 403–406.
- Hlabano, B. (2013). Perceptions of traditional healers on collaborating with biomedical health professionals in UMkhanyakude District of KwaZulu Natal. Master's Thesis. University of South Africa. South Africa.
- Hillenbrand, E. (2006). Improving Traditional-Conventional Medicine Collaboration: Perspectives from Cameroonian Traditional Practitioners. *Nord. J. Afr St.*, 15: 1–15.
- Human Sciences Research Council (HSRC) (2009). Traditional health practitioners in South Africa. <http://www.hsrc.ac.za/News-document-1159.phtml>, 20 May 2018.
- Kayombo, E.J.; Uiso, F.C.; Mbwambo, Z.H.; Mahunnah, R.L.; Moshi, M.J. and Mgonda, Y.H. (2007). Experience of initiating collaboration of traditional healers in managing HIV and AIDS in Tanzania. *J. Ethnobiol. Ethnomed.*, 3: 6.
- Krah, E.; de Kruijf, J. and Ragno, L. (2018). Integrating Traditional Healers into the Health Care System: Challenges and Opportunities in Rural Northern Ghana. *J. Community Health.*, 43: 157–163.
- Komolafe K. (2007). The Relevance of African Traditional Medicine to the Healthcare Needs of Mankind. Nelson Mandela School of Medicine, Durban.
- Lange, G. (2018). Different Types of Healers in South Africa. <https://theculturetrip.com/africa/south-africa/articles/different-types-healers-south-africa/>, 10 July 2018.
- Latif, S.S. (2010). Integration of African traditional health practitioners and medicine into the health care management system in the province of Limpopo. MBA thesis, University of Stellenbosch, Stellenbosch.
- Le Roux-Kemp, A. (2010). A legal perspective on African traditional medicine in South Africa. *Comp. Int. Law J. South. Afr.*, 43: 237–291.
- Ly, A. (2018). Traditional Medicines and Cancer Therapies in African Landscape. *J. Tumor. Med. Prev.*, 3: 001–006.
- Magoro, M.D.; Masoga, M.A. and Mearns, M.A. (2010). Traditional Health Practitioners' practices and the sustainability of extinction-prone Traditional Medicinal Plants. *Int. J. Afr. Renaiss. Stud.*, 5: 229–241.
- Mafuva, C. and Marima-Matarira, H.T. (2014). Towards professionalization of traditional medicine in Zimbabwe: A comparative analysis to the South African policy on traditional medicine and the Indian Ayurvedic system. *Int. J. Herb. Med.*, 2: 154–161.
- Makhubu, L. (2006). Traditional medicine: Swaziland. *Afr. J. Tradit. Complement. Altern. Med.*, 5: 63–71.
- Manzini, T.Z. (2005). Production of wild ginger (*Siphonochilus aethiopicus*) under protection and indigenous knowledge of the plant from traditional healers. Doctoral dissertation. University of Pretoria. South Africa.
- Martin, G. (2014). Multiscale action for medicinal plants: implementing the Global Strategy for Plant Conservation on a human dimension. SAMARA: The International Newsletter of the Partners of the Millennium Seed Bank Partnership., 26: 2–12.
- Mbatha, N.; Street, R.A.; Ngcobo, M. and Gqaleni, N. (2012). Sick certificates issued by South African traditional health practitioners: current legislation, challenges and the way forward. *S. Afr. Med. J.*, 102: 129–131.
- Mbwambo, Z.H.; Mahunnah, R.L.A. and Kayombo, E.J. (2007). Traditional health practitioner and the scientist: bridging the gap in contemporary health research in Tanzania. *Tanzan. Health. Res. Bull.*, 9: 115–120.
- McFarlane, C. (2015). South Africa: The rise of traditional medicine. *Insight. Afr.*, 7: 60–70.
- Meissner, O. (2009). Traditional medicine and its accommodation in the South African national health care system with special attention to possible statutory regulation. Doctoral dissertation, University of South Africa. Pretoria. South Africa.
- Merriam, S. and M. Muhamad (2013). Roles Traditional Healers Play in Cancer Treatment in Malaysia: Implications for Health Promotion and Education. *Asian. Pac. J. Cancer. Prev.*, 14: 3593–601.

- Mohamedbhai, G. (2013). Indigenous knowledge must be harvested for development. University World News. Issue 262. <http://www.universityworldnews.com/article.php?story=2013030712115748>, 10 July 2018.
- Moshabela, M., T. Zuma and B. Gaede (2016). Bridging the gap between biomedical and traditional health practitioners in South Africa. *South African health review*. *S. Afr. Health Rev.*, 2016: 83–92.
- Mothibe, M.E. and M. Sibanda (2019). African Traditional Medicine: South African Perspectives. <https://www.intechopen.com/online-first/african-traditional-medicine-south-african-perspective>, 14 August 2019.
- Mototo, O.M. (1999). Willingness of traditional healers regarding collaboration with western psychiatrist in health care. Doctoral thesis, University of Free State. Bloemfontein, South Africa.
- Nemutandani, S.M.; Hendricks, S.J. and Mulaudzi, M.F. (2016). Perceptions and experiences of allopathic health practitioners on collaboration with traditional health practitioners in post-apartheid South Africa. *Afri. J. Prim. Health Care. Fam. Med.*, 8: 1–8.
- Nyika, A. (2007). Ethical and regulatory issues surrounding African traditional medicine in the context of HIV/AIDS. *Dev. World. Bioeth.*, 7: 25–34.
- Omoleke, I.I. (2013). The "Relevance" of the African traditional medicine (alternative medicine) to health care delivery system in Nigeria. *J. Dev Areas.*, 47: 319–338.
- Pefile, S. (2005). South African legislation on traditional medicine. Science and Development Network.
- Peltzer, K.; Mngqundaniso, N. and Petros, G. (2006). A controlled study of an HIV/AIDS/STI/TB intervention with traditional healers in KwaZulu-Natal, South Africa. *AIDS Behav.*, 10: 683–690.
- Peu, M.D. (2000). The attitude of community health nurses towards integration of traditional healers in primary health care in North West province. Master's thesis, University of South Africa. South Africa.
- Pinkoane, M.G. (2005). Incorporation of traditional healers into the national health care delivery system. Doctoral thesis, North West University. South Africa.
- Pondani, P.C.; Bhatt, I.D.; Negi, V.S.; Kothiyari, B.P.; Bhatt, A. and Maikhuri, R.K. (2016). Promoting medicinal plants cultivation as a tool for biodiversity conservation and livelihood enhancement in India Himalaya. *J. Asia Pac. Biodivers.*, 9: 39–46.
- Puckree, T.; Mkhize, M. and Mgobhozi, Z. (2002). African traditional healers: what health care professionals need to know?. *Int. J. Rehabil. Res.*, 25: 247–251.
- Ramchundar, N. and Nlooto, M. (2017). The willingness of African traditional healers to collaborate with researchers to further develop their traditional medicines in Kwazulu-Natal Province, South Africa. Pula: Botswana. *J. Afr. Stud.*, 31: 162–179.
- Richter, M. (2003). Traditional medicines and traditional healers in South Africa. Treatment action campaign and AIDS law project. 17: 4–29.
- Sebata, T.P. (2015). The Role of Traditional Healers in the treatment of HIV and AIDS in Tsetse Village: The Case of Mafikeng in the North West Province, A mini-dissertation submitted in partial fulfilment of a Masters of Arts in Indigenous Knowledge Systems (IKS). North West University, South Africa.
- Sivhaga, K.; Hlabano, B. and Odhiambo, P.O (2012). Using partnership approach to reduce mortality and morbidity among children under five in Limpopo Province, South Africa. *Pan Afr. med. J.*, 13: 14.
- Steyn, M. and Muller, A. (2000). Traditional healers and cancer prevention. *Curationis.*, 23: 4–11.
- Street, R.A.; Ngcobo, M.; Mbatha, M. and Gqaleni, N. (2012). Potential occupational health challenges in the traditional medicine practice. *Occup. Health. South Afr.*, 18: 13–17.
- Tagwireyi, D., Ball, D.E. and Nhachi, C.F. (2002). Traditional Medicine Poisoning in Zimbabwe: Clinical Presentation and Management in adults. *Hum Exp Toxicol.*, 11: 579–586.
- Tyilo, M. (2019). The Sangoma's dilemma: Practicing Traditional medicine in 21<sup>st</sup> century South Africa. Daily Maverick.
- Van Niekerk, J.P. (2012). Traditional healers formalized?. *S. Afr. Med. J.*, 102: 105–106.
- Van Rooyen, D.; Pretorius, B.; Tembani, N.M. and Ten Ham, W. (2015). Allopathic and traditional health practitioners' collaboration. *Curationis.*, 38: 1–10.
- World Health Organization (WHO) (2000). Traditional and modern medicine harmonizing the two approaches. A Report of the Consultation Meeting on Traditional and Modern Medicine: Harmonizing the Two Approaches, 22-26 November 1999, Beijing, China.
- World Health Organization (WHO) (2003). Traditional Medicine: Our culture, our future. *Afr. Health Monitor.*, 4: 27–34.
- Zimba, Z.F. (2014). Challenges faced by traditional healers when treating people living with HIV and AIDS: The case of Intsika municipality, Eastern Cape Province. A Dissertation submitted in fulfillment of the requirements for the Degree of Master of Social Work (MSW). University of Fort Hare. South Africa.