

Knowledge, attitude and perceptions of dental professionals on patients seeking oral health care from traditional healers in KwaZulu-Natal, South Africa

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ABSTRACT

Background

The general and oral healthcare needs of communities far exceed the capacity of the current public health system of South Africa (SA). This results in patients deferring treatment or seeking alternative measures in the form of the traditional health practice. It is important for dental professionals in the health system to be aware of such oral health care seeking behaviour within rural communities to initiate joint corporate oral health education programmes and referral systems that resonate with these communities.

Aims and objectives

The study aimed to explore the knowledge, attitude and perceptions of dental professionals (16 dentists, 25 dental therapists, 4 oral hygienists and 3 dental assistants) regarding patients seeking oral health care from traditional healers.

Methods

This was an exploratory, cross-sectional study that evaluated dental professionals' knowledge, attitude and perceptions on patients seeking oral health care from traditional healers. A purposive sampling technique using specific inclusion criteria

was used to select 48 qualified dental professionals (oral hygienists, dentists, dental assistants and dental therapists) practising in rural KwaZulu-Natal. A self-administered questionnaire was used for data collection. Data related to sociodemographic variables and knowledge, attitudes and perceptions of dental professionals were recorded.

Results

Most (77.1%) dental professionals were aware that their patients were seeking oral health care from traditional healers. They further maintained that the traditional health practice included ideas and methods from which the oral health fraternity could benefit.

Conclusion

This study revealed most of the dental professionals in rural Kwa-Zulu Natal have encountered patients who have consulted traditional health practitioners for oral health care. The dental personnel were accepting of traditional healers and believed that traditional healers could contribute positively to rural oral health care.

Keywords

Oral health care, oral health professionals, oral diseases, dental professionals, rural communities, traditional health practice, traditional healers.

INTRODUCTION

The current health system in SA continues to be challenged to meet the healthcare demands of its nation adequately, especially in KZN with an existing quadruple disease burden of HIV/AIDS, tuberculosis, chronic illnesses and injuries.³ In addition, SA has a shortage and maldistribution of health workers in the public sector,⁴ with more healthcare workers in urban than in rural areas.⁵ KZN has a population of 11.5 million,⁶ of which only 16% have medical insurance, allowing them access to the private sector health services, leaving 84% of the population dependent on the underresourced public health sector.⁷ Dental caries remains one of the most prevalent oral health diseases. Most dental professionals are employed in the private sector even though most of the population access the public sector which only offers basic oral health care.⁸ Consequently, many defer treatment for their dental problems or seek alternate forms of care such as traditional healers to treat their oral diseases. In developing countries approximately 80% of people rely on traditional medicine (TM)^{9, 10, 11} for their healthcare needs.

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- | | |
|---|-----|
| 1. Sibusisiwe Dlamini | 60% |
| research topic, data collection, data analysis, article writing | |
| 2. Ilana Moodley | 30% |
| research supervision, article writing, editing | |
| 3. Mogie Reddy | 30% |
| research supervision, article writing, editing | |

Table 1 Number of participants per district municipality

District municipality	Dentists (n)	Dental therapists (n)	Oral hygienists (n)	Dental assistants (n)
Umzinyathi	2	2	1	
Ethekwini metro	2	3		
Umgungundlovu		3	1	
Umkhanyakude	2	2	1	
Harry Gwala	2	3		
Uthukela	2	1		1
ILembe	3			
King Cetshwayo		4		
Zululand	2	2		
Amajuba		4		
Ugu	1	1	1	2
Total	n=16	n=25	n=4	n=3

Traditional healers have no formal medical training but are recognised as competent in their communities as they are easily accessible, affordable and culturally and socially acceptable.¹² Thus, most people in rural areas seek treatment from traditional healers, more often for oral diseases, than from dental professionals due to accessibility and affordability. It is important for dental professionals in the health system to be aware of such oral health care seeking behaviour within rural communities because healthcare workers are bound to attend to patients presenting with advanced oral disease, who have first sought assistance from traditional healers. This study aimed to determine the knowledge, attitude and perceptions of dental professionals on patients seeking oral health care from traditional healers in KZN, South Africa.

METHODOLOGY

Study design

This study was conducted in the year 2020, an exploratory cross-sectional study design to determine the knowledge, attitude and perceptions of dental professionals (oral hygienists, dentists, dental therapists and dental assistants) on patients seeking the traditional health practice for oral health care. This study is part of a bigger study which also explored the views of traditional healers on oral health care

and the opinions of community members seeking dental treatment from traditional healers. Ethical approval was obtained from the Human and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal (HSSREC/00000951/2020) and the KZN Department of Health (KZ_202003_007) to commence with the study.

Setting

The study was conducted in the 11 districts of the province of KZN focusing on the rural local municipalities. The district municipalities were: Amajuba, Ethekwini, Harry Gwala, ILembe, King Cetshwayo, Ugu, Umgungundlovu, Umkhanyakude, Umzinyathi, Uthukela and Zululand.

Sampling and selection criteria

A purposive sampling technique using specific inclusion criteria was used to select 55 dental professionals from 11 district municipalities of KZN. The participants were sampled, assuming a population size of 302 dental professionals in the province.¹³ These criteria included obtaining consent from the participants and their institutions, location (employed in rural KZN), expertise/qualification (Certificate, Diploma or Bachelor's degree in Dental Assisting, Oral Hygiene, Dental Therapy and Dental Surgery) and employment status (state or private sector or both). Table 1 & 2 depict the participants according to the specific inclusion criteria.

Table 2 Stratification by sector

Qualification	Employment status			
	Employed by state	Self-employed	Employed in private sector	Employed by private and public sector
Dentist	4	10	1	1
Dental therapist	15	8	2	
Oral hygienist	3		1	
Dental assistant	3			
Total	25	18	4	1

Table 3 Qualification of participants

Qualification	Gender		Qualification level		
	Male	Female	Certificate	Diploma	Bachelors' degree
Dentist	13	3			16
Dental therapist	11	14			25
Oral hygienist		4		4	
Dental assistant	1	2	3		

Data collection tool

Informed consent was obtained from all participants. An online questionnaire using QuestionPro was used for those participants who had internet access. Links were emailed to those participants who were registered with the South African Dental Therapy Association (SADTA). Self-administered questionnaires were delivered by the researcher to those participants who were not registered with SADTA and had no internet access. The complete questionnaires were collected a week later.

The questions were close ended and explored the knowledge, attitude and perceptions of dental professionals on the traditional health practice's intervention in oral health care. The questions also probed the dental professionals' experiences with their patients seeking oral health care in the traditional health practice and their thoughts on whether or not traditional healers can contribute positively to oral health care.

Pilot study

A pilot study was not conducted due to the lockdown restrictions imposed by the COVID-19 pandemic.

Data analysis

Quantitative data was entered into an Excel spreadsheet and analysed with the Statistical Package for Social Sciences (SPSS) software version 26.0. The outcomes of the variables that measured the knowledge, attitude and perceptions of dental professionals were presented by descriptive analysis using cross-tabulations, graphs and other figures.

RESULTS

The results of this study are presented in two sections, namely demographics of participants and the participants' responses on knowledge, attitude and perceptions on patients seeking oral health care from the conventional and traditional health practices; to address the objectives of the study.

The answers employed the Likert scale format. Overall knowledge scores were labelled as good knowledge (participants who answered more than 50% knowledge items) or limited knowledge (participants who answered less than 50%).

Demographic data

Of the targeted 55 participants; 48 participated, yielding

Table 4 Number of participants per district

District	Umzinyathi	5	10.4%
	Ethekwini metro	5	10.4%
	Ugu	5	10.4%
	Umgungundlovu	4	8.3%
	Umkhanyakude	5	10.4%
	Harry Gwala	5	10.4%
	Uthukela	4	8.3%
	ILembe	3	6.3%
	King Cetshwayo	4	8.3%
	Zululand	4	8.3%
	Amajuba	4	8.3%
	Religion	Christian	36
Islam		3	6.3%
Hindu		3	6.3%
Africanist		5	10.4%
Shembe		1	2.1%

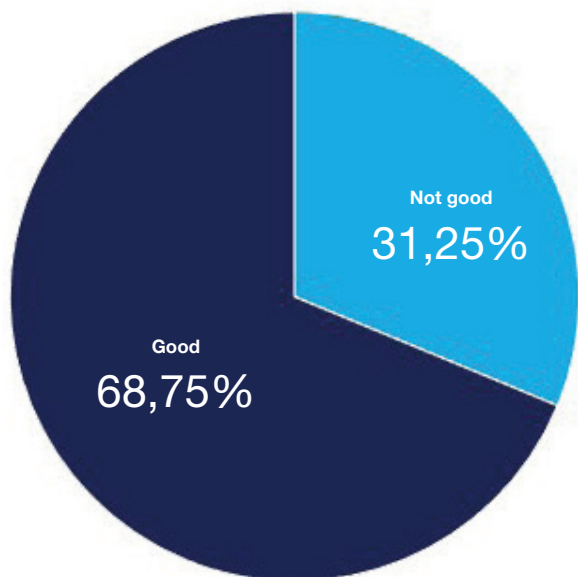


Figure 1 Knowledge level of dental professionals on the traditional health practice

an 87% response rate. While this was a good response rate, ILembe had the least participants with only 6% (n=3) responding. Overall, the ratio of males to females was approximately 5:7 41.7% (n=20): 58.3% (n=28). The participants' qualification are summarised in Table 3.

More than half the participants 52.1% (n=25) were dental therapists, 33.3% (n=16) dentists, 8.3% (n=4) oral hygienists and 6.3% (n=3) dental assistants.

While 52.1% (n=25) of the respondents were employed by the KZN Department of Health, 39.6% (n=19) were self-employed, 6.3% (n=3) employed in private practice and 2.1% (n=1) were employed by both public and private practice.

The number of participants per district is summarised in Table 4 as well as their religious affiliations. ILembe district had the least participants 6.3% (n=3). Most participants 75% (n=36) were Christian.

PARTICIPANTS' RESPONSES

Knowledge of dental professionals regarding the traditional health practice

Generally, participants indicated significant levels of knowledge regarding the traditional health practice. Figure 1 represents the knowledge levels of all the participants regarding the traditional health practice's interventions in oral health.

The majority (68.75%) of the participants displayed good knowledge while 31.25% showed limited knowledge.

This was further supported by more than half the respondents who were aware that patients consult the traditional health practice for oral diseases. Table 5 depicts the knowledge of dental professionals on traditional health practice and oral health care.

Most participants 58.4% (n=28) accepted the traditional health practice, while 22.9% did not and 18.8% (n=9) were neutral. Although most participants 77.1% (n=37) indicated to have come across patients who have sought traditional health practice for oral health care, 14.6% (n=7) disagreed and 8.3% (n=4) were neutral. In response to spiritual forces causing oral diseases, most participants 43.7% (n=21) disagreed, 31.3% (n=15) were neutral and 25% (n=12) agreed.

Regarding physical forces being the cause of oral diseases, most of the respondents 73% (n=35) agreed, 20.8% (n=10) disagreed and 6.3% (n=3) were neutral. When asked whether physical forces were the only cause of oral health related conditions 64.6% (n=31) disagreed meaning that they believed there were other factors which could cause oral diseases, 20.8% (n=10) were neutral and 14.6% (n=7) agreed.

Participants' responses from Umgungundlovu, Umkhanyakude and Amajuba district municipalities indicated 100% good knowledge compared with King Cetshwayo and Uthukela district municipalities with the least knowledge (25%).

Table 5 Dental professionals' responses on knowledge

Knowledge	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	n	%	n	%	n	%	n	%	n	%
I accept the traditional health practice	5	10.4%	6	12.5%	9	18.8%	25	52.1%	3	6.3%
I often come across patients who have visited a Traditional Health Practitioner (THP)	3	6.3%	4	8.3%	4	8.3%	33	68.8%	4	8.3%
Oral health related conditions can be caused by spiritual forces	11	22.9%	10	20.8%	15	31.3%	11	22.9%	1	2.1%
Oral health related conditions can be caused by physical forces	5	10.4%	5	10.4%	3	6.3%	33	68.8%	2	4.2%
Oral health related conditions are only caused by physical forces	7	14.6%	24	50%	10	20.8%	5	10.4%	2	4.2%

Table 6 Participants' responses on attitude

Attitude	Strongly disagreed		Disagreed		Neutral		Agree		Strongly agree	
	N	%	N	%	N	%	N	%	N	%
Oral health related conditions can only be healed through the conventional health practice	11	22.9 %	18	37.6%	6	12.5%	12	25%	1	2.1%
Dental professionals are the only body capable of treating oral health related conditions	6	12.5%	18	37.5%	5	10.4%	14	29.2%	5	10.4%
I am comfortable with my patients seeing THPs for oral health related conditions	3	6.3%	13	27.1%	8	16.7%	22	45.8%	2	4.2%
It is important for dental professionals to consider the patients' belief system at all times	0	0.0%	4	8.3%	4	8.3%	25	52.1%	15	31.3%

Attitude of dental professionals

This segment reports on participants' attitudes on patients seeking oral health care from traditional healers labelled as Traditional Health Practitioners (THPs) depicted in Table 6.

In response to oral diseases being healed only through conventional health practice 60.5% (n=29) of dental professionals disagreed, 27.1% (n=13) agreed and 12.5% (n=6) were neutral. In response to whether dental professionals are capable of treating oral health related conditions, half the respondents 50% (n=24) disagreed, 39.6% (n=19) agreed and 10.4% (n=5) were neutral.

As to participants' response to whether they were comfortable with their patients seeing traditional healers for oral health related conditions, 50% (n=24) agreed, 33.4% (n=16) disagreed and 16.7% (n=8) were neutral. An overwhelming 83.4% (n=40) responded it was important to consider the patients' belief system at all times, while 8.3% (n=4) were neutral and the remaining 8.3% (n=4) disagreed.

Perceptions of dental professionals

This section reports the participants' responses on oral health care, the quality of life and involvement of the traditional health practice.

Based on how the respondents perceived oral health related quality of life and the traditional health practice, the majority 97.9% (n=47) agreed that oral health had an effect on the overall quality of life. In relation to the quality of life, an overwhelming 95.9% (n=46) indicated that it was important to view patients holistically instead of just identifying oral anomalies. More than half the participants (60.4%, n=29) indicated that it was not important to share the patient's information with their family, 23% (n=11) said it was important and 16.7% (n=8) were neutral.

The respondents were all qualified dental personnel but 68.8% (n=33) said they have identified oral anomalies beyond their understanding, 20.9% (n=10) disagreed and 10.4% (n=5) were neutral. More than half the participants 56.3% (n=27) said the traditional health practice included ideas and methods that the oral health fraternity could benefit from,

31.3% (n=15) were neutral and 12.5% (n=6) disagreed. The majority of the respondents 81.3% (n=39) were willing to learn more about the traditional health practice and how traditional healers could play a role in strengthening oral health, thus improving the quality of life.

DISCUSSION

This study analysed the knowledge, attitude and perceptions of dental professionals regarding patients consulting traditional healers for oral health care. Most participants agreed that they have encountered patients who have consulted traditional healers for oral health care. This study findings is similar to research conducted by the WHO which found that 80% of South Africans rely on traditional medicine for their health care needs.¹⁴ Some of the reasons for this include that dental treatment is expensive and dental care seems more accessible to those who can afford it.¹⁵

All the dental professionals in this study practised in rural KZN, where only 16% of the population are able to afford private dental care³, leaving 84% of the population dependent on the challenged public health sector for their healthcare needs.³ These challenges include financial barriers, poor infrastructure and limited resources and services in rural public health facilities.¹⁶ Given the high unemployment rate in most participating district municipalities (Umzinyathi, 57.8%, 50.8% in Umkhanyakude)¹⁷, it is evident that many rural residents cannot afford private dental treatment. The public health facilities appear overburdened: for example, Umkhanyakude – a rural district located in the far northern region of KZN with a population distribution of 689,090 people – has 5 public hospitals, 1 community health centre and 52 primary health clinics. However, there are 254 registered traditional healers.^{17,18,19,20,21} This implies that many patients are attending the overburdened public health care facilities²² and, with traditional healers being more easily accessible, people are inclined to use traditional, complementary and alternative medicine for oral health care.²³

Other reasons why people consult traditional healers include that they are more accepted than health care providers and their methods are more effective and less invasive as they

mainly use herbs and medicinal plants.²⁴ A study in KZN found that about 70% of patients consulted a traditional healer as a first choice for health care, including oral health care and potentially life-threatening conditions.²⁵ Hence it is important for dental professionals to have an understanding of this type of care when attending to patients in rural communities.

Knowledge of dental professionals

This study showed that participating dental professionals practising in rural communities of KZN have a good knowledge of traditional health practices. Most participants agreed that they have come across patients who have consulted with a traditional healer for oral health related conditions. This study findings is similar to research conducted by the WHO which found that majority South Africans rely on traditional medicine for their healthcare needs.¹⁴

More than half the participants have accepted the traditional health practice. Research has shown that traditional healers heal or attempt to heal patients solely using religious and spiritual gifts, while some heal with medicinal plants, herbs and concoctions.²⁶ This contrasts with dental school training in which dental professionals receive rigorous clinical training to obtain the necessary skills to assist patients with diagnosis and management of various oral diseases. By accepting traditional health practice, the participants of this study have demonstrated the importance for dental professionals to adapt to unique cultural landscapes in which they practice and accept the cultural beliefs of the communities they serve. By embracing cultural understanding and knowledge, dental professionals can improve the quality of dental care for all their patients.

The participants in this study were questioned about the different dynamics of the causes of oral diseases. Most of the participants alluded that physical forces were the cause of oral diseases. However, when specifically asked whether physical forces were the only cause of oral diseases, most disagreed meaning they believed that there were other factors which could cause oral diseases. Dental professionals' training is based on sound scientific and evidence-based research, yet almost 65% of them agreed that there may be other forces. This further demonstrates that the study participants show acceptance and respect for cultural beliefs within the communities in which they work. This acceptance and respect can be used as an opportunity for dental professionals to initiate a collaboration with traditional healers to reach a point of mutual understanding in the best interest of the patients they treat. This includes sharing knowledge on aspects of oral care which may require referral to and further management by dental professionals. This is supported by the literature which cites examples that through constructive engagement and developing good relationships between the two practices, traditional healers became actively involved with a TB control programme. In Cape Town, traditional healers were trained to be TB and HIV/AIDS supporters by medical personnel.^{27,28}

Attitude of dental personnel

Participants were asked about their attitude towards patients seeking oral health care from traditional healers. Most respondents indicated it is highly important to take into consideration the patients' belief system at all times.

This concept affirms previous research which suggests that African spirituality should neither be rejected nor neglected when treating patients, but should be used as a catalyst that facilitates a patients' recovery from illness.²⁹ Furthermore, spirituality is important as it acts as a tool of hope thus assisting with quick recovery, especially when combined with the conventional health practice.³⁰ In this study, dental personnel had no issue with patients seeking oral health care from traditional healers as they believed that they are not the only body capable of treating oral diseases. This is also because the dental personnel held the patients' belief system in high regard.

Perceptions of dental professionals

Viewing patients generally instead of just identifying oral anomalies is based on how previous studies have defined oral health. It is often defined as a multifaceted phenomenon which includes the ability to speak, smile, smell, taste, touch, chew, swallow and convey a range of emotions through facial expressions with confidence and without pain, discomfort and disease of the craniofacial complex.³¹ When oral diseases manifest, the mouth and face can affect an individual's self-esteem as well as their wellbeing.³² The participants in this study agreed with this phenomenon as they alluded that oral health had an overall effect and viewing patients holistically was just as important as identifying oral anomalies.

There is no study available reporting on oral diseases and spiritual causes and treatment. However, in the African context it is reported that spiritual causes of illness result in difficult diagnosis and treatment.³³ This study informs that though all the participants were qualified and practising dental professionals most agreed to have identified oral anomalies beyond their understanding, meaning there was a possibility of other causes beside the physiology.

By virtue, human beings have a basic right to choose among several options based on factors suitable for them. Some of these facets include their belief system, preferences, knowledge and perceptions.³⁴ In health care, previous research has identified gaps in the traditional health practice, resulting in low levels of collaboration between conventional and traditional health practices.³⁴ A deliberate collaboration should be considered in order to holistically heal the patient. This can be a challenge in oral health care based on former literature identifying numerous loopholes around policy and authorisation for traditional healers in the public health system due to the lack of analytical review.³⁴ This study showed that most dental personnel were not cluded by this judgement as they believe the oral health fraternity could benefit from ideas and methods of the traditional health practice. They further showed willingness to learn more about the role of traditional healers in oral health care and the quality of life for the benefit of the rural communities they serve.

Relevance of study

This study evaluated the knowledge, attitude and perceptions of dental professionals regarding patients seeking oral health care from traditional healers. The findings of the study will contribute to the body of knowledge on traditional medicine and provide a better understanding and awareness among dental professionals of patients seeking oral health care from THPs. This study can also initiate collaboration between dental professionals and THPs,

further contributing to the development of referral patterns in improving patient care in rural KZN.

Considering that there is a shortage of alternative oral health research in the traditional health practice at higher learning institutions, this study can be a catalyst for more research on this subject. Research recognises that knowledge does not translate to immediate action; the disparities in this study may be primarily resolved by taking into account the traditional health practice and the patients' belief system. These can be integrated into the community dentistry programme for students, presented in conferences/workshops/seminars for qualified dental personnel and other professional bodies.

Limitation of the study

The study participants were confined to one province, therefore the results cannot be generalised to other provinces. However, this study can still provide insight into the dental professionals' knowledge, attitude and perceptions on patients seeking oral health care from traditional healers in rural communities and be replicated in other provinces. Further research on rural oral health and the role of THPs in oral health care should be expanded upon as it relates to holistic health care in SA.

CONCLUSION

Most dental professionals are aware of patients consulting traditional healers for oral health care. Dental professionals are scientifically trained to manage oral diseases yet are knowledgeable and accepting of the traditional health practice. Additionally, participants were optimistic that traditional healers could play a significant role in the prevention and care of oral health related conditions through collaborative training programmes. Therefore, it is important to initiate joint oral health education programmes and referral systems that resonate with rural communities.

DECLARATION

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Disclaimer

The views presented in the submitted article are solely the authors' own and not an official statement of the institution.

Conflict of interest

The authors declare that they have no personal or financial relationship(s) that may have inappropriately influenced them to write this article.

Ethical consideration

This is outlined in the manuscript.

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Availability of data and materials

The data that supports the findings of this study are available from the corresponding authors upon suitable request.

REFERENCES

- Reddy M, Singh S. (2015). A framework for integrated school oral health promotion within the Health Promoting Schools Initiative in KZN. Doctor of Philosophy KwaZulu-Natal
- Amer AI, Alsehim WY, Alabdalaal WH, Alsemran OM, Mansori OM, Almahmadi DS, *et al.* (2022). Effect of untreated dental caries on school performance and social life. *Int. J. Community Med Public Health* 9:481-5
- Department of Health. (2014). Annual Report 2013/14. Pretoria: DoH
- Ntuli ST & Maboya E. (2017). Geographical distribution and profile of medical doctors in public sector hospitals of the Limpopo Province, South Africa. *African Journal of Primary Health Care and Family Medicine*. 9(1)
- Loots H, Hertzog E, van den Heever A, *et al.* (2015). Identifying the determinants of and solutions to the shortage of doctors in South Africa: Is there a role for the private sector in medical education? A report commissioned by the Econex Competition and Applied Economics. 1-56
- Statistics South Africa. (2022). <https://www.statssa.gov.za/?p=15601> Accessed on 17 April 2023
- National Department of Health. (2014). Department of Health Strategic Plan. Pretoria: e-News. <https://www.health-e.org.za/2014/09/25/report-department-health-strategic-plan-201415-20189/>
- Bhayat A & Chikte U. (2019). Human Resources for oral health care in South Africa: A 2018 Update. *International Journal of Environmental Research Public Health*. 16(10): 1668
- Mayori A. (2013). Traditional use of medicinal plants in Southern-central Zimbabwe. *J Ethnobiol. Ethnomed.* 9(31): 18
- Ozioma EOJ & Chinwe OAN. (2019). Herbal medicines in African traditional medicine. *Herbal medicine*, 10, 191-214
- Süntar I. (2020) Importance of ethnopharmacological studies in drug discovery: role of medicinal plants. *Phytochemistry Reviews*. 19(5):1199-209
- Agbor AM and Naidoo S. (2011). "Knowledge and practice of traditional healers in oral health in the Bui Division, Cameroon". *Journal of Ethnobiology and Ethnomedicine* 7(1): 6.
- Health Systems Trust Report. (2020). https://www.hst.org.za/publications/South%20African%20Health%20Reviews/Chapter29_Indicators_SAH21_04022022_OD.pdf
- Cochran WG. (2007). Sampling techniques, Wiley Eastern
- Gqaleni N, Mbatsha N, Mkhize T, Naidoo S, Makhathini M, Buthelezi T, David V and Moodley I. (2007). "Education and Development of Traditional Health Practitioners in isiZulu to promote their Collaboration with Public Health Care Workers". *Interdisciplinary Journal for the Study of the Arts and Humanities in Southern Africa* 17
- Lamiraud K, Booysen F, ShceixAdlung X. (2005). The impact of social health protection on access to health care, health expenditure and impoverishment: A case study of South Africa
- Gaede B, Versteeg M. (2011). "The state of the right to health in rural South Africa". *South African health review* 2011: 99-106
- KZN Annual Report 2017/18 <http://www.kznhealth.gov.za/2017-2018-AnnualReport.pdf> Retrieved on 6 April 2019
- KZN Business Report. "Boosting Economic Activity" from <http://www.kznopbusiness.co.za/>. Accessed on 9 April 2019
- KZN DOH Health Districts. <http://www.kznhealth.gov.za> Accessed on 9 April 2019
- Statistics South Africa - Statistics by place. <http://www.statssa.gov.za>. Accessed on 9 April 2019
- Municipalities of South Africa. <http://www.municipalities.co.za> Accessed on 22 January 2019
- Shisana O, Rehle T, Louw J, Zungu-Dirwayi N, Dana P, Rispel L. (2006). "Public perceptions on national health insurance: moving towards universal health coverage in South Africa". *South African Medical Journal* 96(9): 814-818
- Shewamene Z, Dune T & Smith CA. (2017). "The use of traditional medicine in maternity care among African women in Africa and the diaspora: a systematic review". *BMC complementary and alternative medicine* 17(1): 1-16
- Puckree T, Mkhize M, Mgobhozi Z, Lin J. (2002). "African Traditional Healers: what healthcare professionals need to know". *International Journal of Rehabilitation Research* 25(4): 247-251
- Pouchly A. (2012). "A narrative review: arguments for a collaborative approach in mental health between traditional healers and clinicians regarding spiritual beliefs". *Mental Health, Religion and Culture* 15(1): 65-85
- A model for South Africa: The National Reference Centre for African Traditional Medicines. *NRCAttraditionalmedicinepart1.pdf* Accessed on 15 September 2022
- AIDS Foundation of South Africa: Traditional medicine, culture and health. ids.org.za/page/traditional-medicine-culture-and-health. Accessed on 15 September 2022
- Asare M, Danquah SA. (2017). "The African Belief System and the Patients' Choice of Treatment from Existing Health Models: The Case of Ghana". *Acta Psychopathol.* 3(4)
- FDI. (2019). "Oral Health". Retrieved on 5 September 2019 from www.fdiworldental.org/oral-health
- Bennadi, D. Reddy, CVK. (2013). "Oral health related quality of life". *J. Int Soc. Prev. Community Dent* 3(1): 1-6
- Anthony DJ. (2003). *Psychotherapies in counselling*. Bangalore, India. Anugraha Publications
- Kaboru BB, Falkenberg T, Ndubani P, Hojer B, Vongo R, Brugha R, Faxelid E. (2006). "Can biomedical and traditional health providers work together? Zambian practitioners' experiences and attitudes towards collaboration in relation to STIs and HIV/AIDS care: a cross-sectional study". *Human Resources for Health* 4(16)
- Mhame PP, Busia K, & Kasilo OMJ. (2010). "Collaboration between traditional and conventional health practitioners: some country experiences". *The African Health Monitor* 14: 40-46
- Campbell-Hall V, Petersen I, Bhana A *et al.* (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(4): 610-628