Eurasian Journal of Anthropology Eurasian J. Anthropol. 2(2):54-69, 2011

Inclusion of traditional medicine in the school curriculum in Zimbabwe: a case study

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Received January 15, 2011
Accepted August 12, 2011

Abstract

This study was carried out in Marondera District, Mashonaland East Province, Zimbabwe in 2009 and 2010 to evaluate the state of traditional medicine in the area and document views of people on whether traditional medicine could be taught at schools. Data was collected from traditional healers, medical doctors, nurses, pharmacists, A-level chemistry students, their teachers, their headmasters & heads of science departments, parents, chiefs, religious leaders, and other influential people in the district. Instruments included questionnaires, interviews, documents and observations. The state of traditional medicine was comparable to that of any other area in the country. Participants agreed to inclusion of traditional medicine in the school curricula but differed on the modalities of teaching the subject. Most traditional healers preferred to have traditional medicine taught as a separate subject whilst most members of each of the other groups of participants thought the subject would most profitably taught as part of existing science subjects. Traditional healers felt that inclusion in existing subjects would pollute their values. The other groups thought the subject would enrich science subjects for example chemistry and the mainstream medical knowledge.

Keywords: *Chemistry, herbal medicines, primary health care, purposive sampling, school curriculum, traditional healers*

Introduction

Records produced by traditional medical practitioners reveal that there is an increase in the numbers of people who seek traditional medicines and confirm the evolving commercial aspects of traditional medicine. WHO (2009) reported that in some Asian and African countries, 80% of the population depend on traditional medicine for primary health care and that herbal medicines have become a lucrative form of traditional medicine, generating billions of dollars in revenue in most countries.

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ISSN: 1309-2326

Use of various herbs has transformed villagers' lives in many parts of Zimbabwe, for example, residents of Nyamanjerere village in Guruve (Herald, 2010). The surge in the use of traditional medicine in Zimbabwe may be attributed to the Government's legalization of the traditional healers as alternative primary health care givers. The Traditional Medical Practitioners' Council (TMPCZ) was established as a Department of Traditional Medicine in the Ministry of Health and Child Welfare in July 1980 to register and administer traditional healers. The applicants have to pay a joining fee and an annual fee. However, practitioners who do not charge their clients, for example Magombwe, who, by the nature of their possessing spirits, cannot charge their clients for services they render, and therefore could not afford the fee. They do not have income and they depend on gifts from well-wishers and their spirits do not allow them to use the gifts to pay for membership of associations. They, thus, cannot be protected by the TMPCZ.

Most reports on traditional medicine practices in Zimbabwe emanate from associations of the TMPCZ of which Magombwe are not involved and yet Magombwe are at the top of the Hierarchy of spirit mediums. There is, thus, the possibility that such reports might not be complete. Many people in Zimbabwe, including some senior politicians, do not appear to understand the nature of traditional medicine and traditional religion. The ignorance appears to emanate from the involvement of missionaries and colonial governments in the traditional affairs of the populations of Africa (King Leopold, 1883; Kazembe, 2007). There have been suggestions to correct this discrepancy through inclusion in main stream education but not much has materialized yet.

The chemistry curriculum in Zimbabwe has concepts, objectives and applications on the western science culture that promote the use of western biomedicines but ignore traditional medicine saying it is unhygienic and substandard. This neglects the fact that traditional medicine forms inherent personalized enacted scientific worldviews of both the chemistry teacher and students in the schools (Cobern and Loving, 2000). Students interact with their elders and among themselves, observing and sharing the use of traditional natural remedies. Likewise, the teachers observe and even share ideas on western medicine, scientific ideas and traditional medicine in the society they live in. In the chemistry laboratory, students are faced with new western culture which involves manufacture of medicines, conceptualized as purely synthetic without any link to natural sources, oblivious of the fact that the drugs were developed from the same plants they despise. Some students graduate from universities still ignorant of the fact that cultures in all the continents have had and still have their own traditional medicines, and that western medicine is a derivative of traditional medicine. Students need to be assisted to bridge this gap in knowledge exploring concepts such as extraction, isolation, purification and characterization of the active constituents of plants (WHO, 2009). India, Russia, and China include their traditional medicines in the chemistry curriculum (Ergil, 1996; Lawton, 1987; Spector, 2001). In Africa, Mali and Burundi use traditional medicines to manufacture drugs comparable to western products (Diallo, 1996; Van Puyvelde, 1996).

Research questions

(a) What are the sources of the traditional practitioners' knowledge?
(b) Should traditional medicine be included into the chemistry curriculum?
(c) What aspects of traditional medicine may be included in the chemistry curriculum?
(d) What are the modalities for inclusion?

This study engaged traditional healers, A-level chemistry students, their teachers, heads of science departments, parents, religious leaders, medical doctors, hospital nurses, pharmacists, headmasters, chiefs, influential people, the District Administrator and councillors in Marondera District, Mashonaland East Province, Zimbabwe, 2009-2010.

Sampling

The expert sampling strategy was used (Nyawaranda, 2000), the researcher engaging experts in traditional medicine and mainstream medicine, students and education providers as the main sources of data. The other stakeholders were engaged based on their personalized knowledge and demonstrable experience and expertise (Miles and Huberman, 1984; Robinson, 1995; Bogdan and Biklen, 1998). The instruments used included questionnaires, field notes, structured and unstructured interviews, and observations.

The District Chairperson submitted a document with detailed personal information that guided the criterion sampling. For example, the form of training of the healer sets a criterion to classify the healer as a spirit medium, or practitioner as a result of parental knowledge or reading herbal books, or faith healer. In criterion sampling, the researcher sets a standard of proficiency and then picks all cases that meet the criterion (Robinson, 1995). This expert sampling of traditional healers was enhanced by the snowballing sampling technique whereby the chairperson of the traditional healers assisted in the identification of members to include in the panel of experts. These recommended other experts to be approached. This is a typical purposive sampling technique, where the researcher begins by identifying someone who meets the criteria for inclusion in the study and the identified person then identifies others who can provide the required information. This type of sampling led to representative samples because spirit mediums, herbalists and faith healers who might have been inaccessible, hard to find or locate could thus be reached.

The Mashonaland East Provincial Medical Director was interviewed. He then recommended the involvement of the District Medical Officer who identified doctors, nurses and pharmacists to be interviewed. All doctors, and pharmacists employed in the district accepted being interviewed. Snowball sampling of the 80 nurses in the district lead to 20%, i.e. 16 being included in the sample.

There were 42 A-level chemistry students from 5 of the 6 high schools in the district, namely Bernard Mizeki College (boys only), owned by the Anglican Church; Marondera High (boys and girls), a government high school; Nagle House (girls only), a Roman Catholic Church school; Peterhouse College (boys and girls), privately owned; Waddilove High School (boys and girls), a Methodist Church in Zimbabwe school. Watershed College, the 6th high school in the district, did not participate claiming that their students were ignorant of the nature and use of traditional medicine.

Eighteen A-level chemistry students were residents of Marondera district: Bernard Mizeki College (2 boys), Marondera High (3 girls), Nagle House Girls High (8 girls), Peterhouse (2 boys and 1 girl) and Wadlove High (2 girls) participated. Twenty four A-level chemistry students were not residents of the district: 10 boys and 14 girls. Thus, the whole population of A-level chemistry students, totaling 42 (14 boys and 28 girls), 15 non-Africans and 27 Africans, participated in the study. Ten A-level chemistry teachers (2 from each of the 5 high schools) consisting of 6 males and 4 females, five science heads of departments (males only), four Headmasters and one Headmistress participated.

Purposive sampling was used to select participants from parents and guardians resident in the district, local authorities, religious organizations, and local government departments. Chiefs, District Administrator, District Registrar, Alderman, Council Chairman, Reverends of Churches, Ministers in charge of mission high schools, Influential People: "District Education Officer, Education Officer (quality division), Education Officer (Science and Mathematics), Head of Department (Home Affairs), and Head of Department (Health and Social Services), 2 retired Heads of Schools and 3 Headmen" participated in the study. Religious leaders were included in the study because they have historically been used by enemies of African culture to discredit traditional cultural systems (Bourdillion, 1987).

From larger populations such as the traditional healers and nurses, 30% were sampled (Best and Khan, 1993). From the smaller populations, all members were invited to participate in the study. The final sample consisted of: 36 traditional healers, consisting of n'angas, herbalists, and faith healers; 6 hospital doctors (4 males and 2 females); 16 nurses (6 males and 10 females); 6 pharmacists (4 males and 2 females). The ministers in charge of the church schools, the District Administrator, District Registrar, 2 male local chiefs, 8 councillors (5 male and 3 female) and 10 senior citizens (7 male and 3 female) were also invited and they participated. The 18 parents resident in the district participated as 10 biological parents (5 married couples), 5 male guardians and 3 female guardians. Patients (9) who had been treated by traditional healers for tumours and cancers also participated.

Table 1: Distribution of stakeholders who participated in the study

Participant title	Male	Female	Totals	Males %	Females %	Totals %
Traditional healers						
(a) Spirit mediums	16	10	26	61.5	38.5	14.1
(b) Herbalists	7	3	10	70.0	30.0	5.4
Medical doctors	4	2	6	66.7	33.3	3.2
Nurses	6	10	16	37.5	62.5	8.7
Pharmacists	4	2	6	66.7	0.3	3.2
Chemistry students						
(a) Marondera residents	4	14	18	22.2	77.8	9.7
(b) Non-residents	10	14	24	41.7	58.3	13.0
Chemistry teachers	6	4	10	60.0	40.0	5.4
Heads of Sc. departments	5	0	5	100.0	0	2.7
Heads of schools	4	1	5	80.0	20.0	2.7
Parents	10	14	24	41.7	58.3	13.0
Patients of traditional healers	5	4	9	55.6	44.4	4.9
Ministers of religion	3	1	4	75.0	25.0	2.2
Senior people	7	3	10	70.0	30.0	5.4
Chiefs	2	0	2	100.0	0	1.1
District administrator(s)	1	0	1	100.0	0	0.5
Councillors	5	3	8	62.5	37.5	4.3
District registrar(s)	1	0	1	100.0	0	0.5
Total no of participants	**100**	**85**	**185**			**100.0**

Table 1 indicates the variety of stakeholders who were sampled from medical, educational, family, religious institutes and the general populace. Views were collected and matched to deduce major themes and patterns in different settings. Interviews were conducted in natural settings such as work places, surgeries, pharmacies, clinics, hospitals, schools and homes. Traditional medical practitioners were interviewed and observed as they performed their healing activities in their professional garbs,

possessed or not possessed (Appendix 1).

The Questionnaire

The researcher interacted with participants before the participants filled in the questionnaire (Appendices 2 and 3) so as to explain meanings of items that might not have been clear and to establish rapport. The availability of a number of participants in one place enhanced an economy in time and monetary costs. Realistic data was collected because respondents were given time to study the questionnaire before completing it. On occasions, pharmacists and doctors had to be phoned to remind them to complete the questionnaires. Heads of schools and departments were also encouraged to remind teachers and students to complete the questionnaires and also to be ready for interviews. These strategies helped, but some teachers and students still misplaced questionnaires. The researchers studied the questionnaire responses before finalising the interview strategies.

Documents

The documents obtained from the chairperson of traditional healers at the beginning of the study contained the personal details of traditional healers, including their mode of training and specialist areas of healing. Further documentation was obtained on visits to the healers' practices where records of clients and diseases treated were availed to the researchers. Spirit mediums are generally of poor or zero formal schooling. The spirits do not generally give their mediums chance to attend school, causing most to stop schooling at an early age because of illness. Some become literate later on in life through informal studies with the help of siblings. It is at times amazing how they cope with informal learning compared to the way they perform at school. It is unfortunate that parents and guardians give up on such people's education based on school performance. If a way could be found to nurse their learning and persist in teaching them informally, young spirit mediums could become a joy to teach informally. However, because of the spirit mediums' poor education, their records are made by their assistants, whose education is also poor because of discouragement by the spirits. It is not clear why the spirits appear to be intolerant of the education of their mediums. It is common for a prospective spirit medium to be sick on his/her way to school or at school only to be well upon returning home. For an adult it is quite common for prospective medium to be too unwell to work but to be well and healthy within minutes of packing his/her bags to return home because of illness. However, discussions with assistants revealed much about the organization at the practices.

After attending a consultation session between a traditional healer and his patient, the researcher interviewed the patient to share in his/her experiences and establish whether the patient had been treated for the same problem at hospitals and clinics and how the patient felt about medication from traditional healers. Some of the interviewed patients were non-Africans from the United Kingdom, Ireland, Sweden and the United States of America.

Gender imbalance in the choice of spirit medium

Marondera District had ninety registered traditional healers, comprising of 30 female and 60 male members (Table 2). Spector (2000) observed that in ancient times there were more female healers than male healers. Gelfand et al (1985) concurred that gender inequality in favour of female traditional healers resulted from the part they play when people become traditional healers. The same gender inequality was observed for the 10 herbalists. However, our observations concurred with previous findings (Kazembe,

2007, 2008). Traditional medical practices are guided by spirits whereby spirits choose their mediums, guided by the responsibilities they expect of their mediums. For example, at the apex of the hierarch of spirits are the divine angels whose mediums are referred as Magombwe. Most of the mediums at that level are male (for example Chaminuka, Kaguvi, Dzivaguru) and there is only one prominent female i.e. the medium of the spirit Nehanda. Shona religion has it that all the mediums at that level, men and women, share one spirit which is the same as the spirit Jesus, whose medium was Emanuel the son of Mary, or Mohamed, the one followed in Islam. Thus the gender inequality in traditional medicine is not likely to be a product of human machination.

The documentation kept by the association indicated that there is an Executive District Association and a Provincial Executive Association and both are registered with the TMPC. They both comprise of Chairperson, Secretary, Treasurer, with deputies and committee members. The district association executive had 5 male healers and 3 female healers, apparently in consideration of gender sensitivity. In support of the gender insensitivity of spirits in the choice of mediums, one of the spirit mediums interviewed said that the medium at Matonjeni rock which was consulted by freedom fighters during the liberation war spoke with two voices, one male and the other, female. The medium of a spirit may be human, rock, or a tree as is the case with Mutiusinazita near Marondera. Thus, gender balance should not be an issue, but a matter of faith (Bourdillion, 1987; Spector, 2000; Kazembe, 2007, 2008). However, there were 26 spirit mediums (16 male and 10 female), of whom 4 males and 2 females use hakata for divination and the rest divine using spirits.

The choice of the medium and the responsibilities of the medium are made by the spirit. The medium just does what the spirit demands of him/her (Kazembe, 2008). Of the 14 spirit mediums who were interviewed when they were in trance, 7 males were aware of Magombwe when they were in trance but 2 were unaware when not in trance, whilst 7 females were aware when in trance whilst 4 were unaware when not in trance. The traditional healers concurred that the Gombwe guides and trains them, especially in matters of a religious nature.

Table 2: Sources of healing powers according to association documents

Documented sources of power	Males	Females	Total	Males %	Females %
Spirit mediums	40	19	59	67.8	32.2
Reading herbal books	2	0	2	100.0	0.0
Knowledge from parents	4	1	5	80.0	20.0
Knowledge from parents & spirits	1	0	1	100.0	0.0
Herbal books, parents & spirits	1	0	1	100.0	0.0
Faith healing linked to Christianity	11	10	21	52.4	47.6
Herbal gardening	1	0	1	100.0	0.0
Totals	**60**	**30**	**90**		

Spirit mediums consider Faith healers as spirit mediums who could not get their spirits cleansed because of lack of support from their relatives and they sought refuge in faith healing using their ancestral spirits. Almost all spirit mediums were unable to pinpoint the source of their powers and were content to say that they were possessed by the spirit of their grandfathers or grandmothers and could not distinguish between the spirits of their grandparents and the spirits that possessed their grandparents. The other healers, apart from spirit mediums and faith healers claimed to get their powers from personal ambition coupled with help from parents, spirit mediums and books.

Spirit mediums claim that these other healers got their powers from mashave. According to Shona Religion, this group uses mashave and no other spirits (Kazembe, 2009, 2010).

Thus 53.9% of the traditional healers started with illness followed by consultations with traditional healers, then apprenticeship, whilst 26.9% started with dreaming and illness and 19.2% started with being taken by njuzu, all ending up in consultations and apprenticeship.

These spirit mediums (n'angas) and the non-medium healers are the real herbalists of traditional medicine. Magombwe and faith healers are not herbalists. Table 3 indicates that 14 people (9 male and 5 female) became spirit mediums after unexplainable illness that finally lead to possession with the assistance of already established traditional practitioners. A group of 7 (4 male and 3 female) started off having unexplainable illnesses, dreaming of herbs and departed relatives who had been spirit mediums and showing signs of potential possession, got assistance from established practitioners and finally became spirit mediums.

Table 3: Ways of qualifying to be a spirit medium

Documented activity	Males	Females	Total	Males %	Females %
Illness	9	5	14	64.3	35.7
Dreaming and illness	4	3	7	57.1	42.9
Summoned by njuzu	3	2	5	60.0	40.0
Totals	**16**	**10**	**26**		

Others begin by being taken by a njuzu and disappearing for months or years living with the njuzu under water, eating whatever the njuzu gave him/her. They had heard voices or music from water masses during childhood or adulthood. Njuzu is associated with shave that is strong at herbal curing or hunting. The interviewed healers testified that the njuzu trains the people under water for years on traditional medicine and any other ethnomedical activities (Kazembe, 2008).

Training to become a traditional healer

The interviewed spirit mediums testified that the choice of a spirit medium is made by the spirit (mudzimu or shave). The medium cannot decline and survive. People do not train to be spirit mediums, but to behave as spirit mediums. The training does not concern how the spirit will operate. The so called cleansing of the spirit involves removal of 'crimes' associated with the spirit, either committed by the spirit or by former mediums. Some traditional practitioners err by giving herbs to cleanse the spirit. Cleansing is done by restitution to the offended. That aspect of preparation to become a spirit medium is best done by Magombwe, but traditional healers will not advise their clients early because of greed. They persist on prescribing herbs until they feel that they have taken as much as possible from the client. They then accompany the client to the Gombwe in the hope that the client will be released early so that they continue milking him/her. There is a growing belief that such behaviour will be punished once the spirit has settled in its new medium. The punishment may be suffering or death to the offending traditional healer.

The training for a traditional medical practitioner is generally long and tedious (Kazembe, 2008, 2009). Spirits may cause their mediums to dream about clients, concerning how he/she should treated them, or the medium may hear voices telling him/her what is about to happen or how he/she should behave towards other people. Thus, many activities are based on subconscious or semi-conscious symbolic

association (Bourdillion, 1987:165). Some of the participants (38.6% male and 57.6% female) concurred that the spirit itself does not need any training. Traditional medical practitioners in Zimbabwe are comparable with those in Kenya, South Africa and Tanzania (Swantz, 1990; Ngwaru, 1993; Sandiga, 1995; Chavhunduka, 1999).

The distinguishing characteristic necessary to qualify to be regarded as fully fledged traditional healer is evidence that he/she has the guidance and help of a healing spirit (Bourdillion, 1987; Sandiga, 1999; Kazembe, 2007, 2008, 2009). However, some of the participants could not distinguish between ancestral spirits and mashave and also confused mudzimu and shave as one spirit playing a dual role of mudzimu and shave. Table 4 gives some of the possible combinations of spirits on one medium. Mashave are regarded as the instruments used by ancestral spirits and Magombwe to perform their different roles. Some of the healers could not tell whether it was mudzimu or shave doing the healing.

Table 4: Types of spirits possessing mediums

Possessing Spirit	Males	Females	Total	Males %	Females %	Grand %
Ancestral spirit	1	2	3	33.3	66.7	10.0
Ancestral spirit + shave	13	5	18	72.2	27.8	60.0
Shave alone	2	2	4	50.0	50.0	13.3
Multiple midzimu + multiple mashave	2	3	5	40.0	60.0	16.7
Totals	**18**	**12**	**30**			**100.0**

Observations revealed that healers who were possessed by shave alone were not as powerful as those possessed by ancestral spirits and mashave, since mashave are tools and tools without handlers cannot get work done. Spirit mediums are required to respect spirits. Many spirit mediums cited the case of a traditional healer who was directed by a spirit to a spot where he could obtain an herbal plant to cure cancer. He got to the place and started digging for the roots of the plant as directed by the spirit. He was reprimanded for starting digging before thanking the spirit. He walked all over the mountain for days until he met a man who told him what to do and disappeared into the wilderness. When the spirit medium put snuff to the ground and clapped as a gesture of respect, he realised what was happening and went back to collect the herb he had travelled for.

Spirit mediums were unanimous about every human being associated with mashave. Differences between people will be in the intensity of the shave and its powers. For example a hunter hunts because he/she has the shave to hunt. The best hunters are not necessarily spirit mediums in the sense usually applied. A person can have more than one mashave just as the spirit medium may be possessed by more than one spirits. Some of the spirit mediums in Table 5 had a combination of mashave. Table 5 documents only the dominant mashave on the respective mediums. For example 2 men had njuzu and zungu and 1 woman had njuzu and dona.

The 5 men possessed by Dzviti testified that they were able to defend criminals in court and prevent them from being sentenced to imprisonment. Men possessed by njuzu testified that they were able to handle complicated medical cases such as cancers, tumours and psychiatric disorders. One of them claimed to get into waters when it got tough, consult with njuzu and return with drugs that successfully treated the complications. Witnesses concurred.

Divination is the skill of foretelling what will happen in the future or see what has happened in the past. Traditional medical healers can do it but herbalists cannot

divine. Of the 30 traditional healers who participated, 56.7% divine using the spirit only. Divination by spirit and hakata was a poor second, employed by only 20% of the participants, whilst divination by hakata only was employed by only 10%. Bourdillion (1987) concurred that divination using the spirit was a common feature.

Table 5: Kinds of mashave associated with the participating traditional healers

Names of mashave	Males	Females	Males %	Females %	Talents bestowed
Dona	2	1	66.7	33.3	Hygiene and smartness
Jere	0	1	0.0	100.0	Amassing property
Zungu	4	2	66.7	33.3	Exploration and hunting
Dzviti	5	3	63.3	36.3	Warfare and fighting
Njuzu	6	4	60.0	40.0	Healing, wealth making
Chingweme	1	1	50.0	50.0	Healer tights & quarrels; farming
Total	**18**	**12**			

Table 6: Method of divination employed by traditional healers

Mode of divination	Males	Females	Totals	Males %	Females %	Totals %
Spirit	9	8	17	52.9	47.1	56.7
Spirit and hakata	4	2	6	66.7	33.3	20.0
Hakata	2	1	3	66.7	33.3	10.0
Other items	3	1	4	75.0	25.0	13.3
Totals	**18**	**12**	**30**			**100.0**

Table 7: Collaborative activities practised by traditional practitioners

Collaboration	Males	Female	Totals	Males %	Females %	Totals %
With other T/healers	3	2	5	60	40	16.7
With western doctors	11	0	11	100	0	36.7
With both	2	8	10	20	80	33.3
None	2	2	4	50	50	13.3
Totals	**18**	**12**	**30**			**100.0**

Table 7 indicates that 16.7% of the traditional healers involved in undocumented collaborative activities among themselves. The traditional healers interviewed (70%) indicated that they were collaborating with doctors in hospitals and clinics. The Ministry of Health and Child Welfare expects traditional healers to avail their medications for collaborative research and the ministry is working on the pros and cons of including traditional medicines in hospitals (Sunday Mail 3-9 May 2009). However, some of the traditional healers are not willing to reveal the nature of their medications or to submit them for research fearing that researchers will steal their information and that the spirits might punish them for giving away secrets. All traditional healers indicated that they refer some cases to hospitals.

Hygienic conditions at traditional healers' practices

Female traditional healers requested that the Ministry of Health and Child Welfare allow them to operate as registered midwives. They also requested gloves to use when they performed their midwifery duties. The environments at their work places were clean and pleasant, confirming their awareness of the call for hygienic conditions required by the Ministry of Health and Child Welfare. They indicated that they

charged a small fee so as to buy gloves to use during delivery, indicating that they observe hygiene in compliance with directives from the ministry.

Table 8: Sources of traditional medicines prescribed by traditional healers

Sources of medicines	Males	Females	Totals	Males %	Females %	Totals %
Plant parts	5	9	14	35.7	64.3	46.7
Plant and animal parts	11	3	14	78.6	21.4	46.7
Spirits suggest medication	2	0	2	100.0	100.0	6.7
Totals	**18**	**12**	**30**			**100.0**

Characteristics of herbalists

An herbalist is a non-spirit medium who has learned the different herbs from practising traditional healers, books, parents, siblings and other people and charges fees for herbal treatment (Kazembe, 2007). There are two groups of herbalists. One group comprises of those who learnt through apprenticeship at traditional healers' premises, and the other comprising of those who studied life sciences. These augment their herbal knowledge through research and then practise as herbalists (Kazembe, 2007, 2008). The herbalists who participated in this project were observed to be knowledgeable and more learned than their counterparts in the mainstream traditional medical practitioners' body. However, their services were limited to herbal prescriptions and a bit of counselling.

Characteristics of faith healers

Observations and interviews indicated that this group used water, salt, cooking oil and animal milk wearing red and white garments. It appeared that these were referred to as traditional healers just for convenience. They paused as inclined to Christianity, claiming to be using the spirit of Jesus Christ. They used leaves of mutara (*Gardenia resiniflua*) and muhacha (*Schefflera umbellifera*) to construct models of the cross where Jesus was crucified. Some Faith Healers were reportedly changing from Faith Healers to practice as traditional Healers, apparently vindicating traditional healers' views of faith healers as people who had failed to meet the requirements for acceptance as spirit mediums.

Comparison of traditional medical practitioners with western trained medical doctors

Western trained Medical Doctors are products of enculturation and domination of suppressive ideas on traditional medicine. They believe that biomedicines are synthesized from scratch and their health practices and beliefs are allopathic. Allopathic health delivery system subscribes to health beliefs and practices as derived from current scientific models, involving the use of technology and other modalities of present day health care biomedicines such as immunization, proper nutrition and resuscitation. They reduce the anatomy and physiology of the human body to measurable health entities that are separated from the spiritual welfare of the patient (Helman, 1998; Spector, 2000). This is different from the way of the traditional practitioner who is holistic, treating the whole person, body and soul after divining backwards into the past and forwards into the future, enabling the healer to work on the root of the problem rather than treating the symptoms. Even the herbs themselves may be considered to be holistic, consisting of different compounds which work

together to solve different conditions at the same time, at times in sympathy with each other. Consider the case of insect repellents from *Lippia javanica*, each of the three groups of repellents achieving far less than the whole (Lukwa et al, 2000). Allopathic medicine would have isolated each of the compounds and would not have realized the benefit of synergism.

Teaching of traditional medicine in secondary schools

The characteristics of traditional healers influence their thinking, views and opinions on the argument on the possible teaching model to adopt. The views of the participating practitioners were categorized using guidelines from Strauss and Corbin (1998). The 10 herbalists and 19 spirit mediums believed it was possible to include traditional medicine into the school curriculum, and 7 spirit mediums felt it was impossible, fearing that the secrecy of traditional medicines would be violated. This should not surprise since even allopathic medicine was up to recent times very secret about the identity and constitution of drugs. The healers also differed on the mode of inclusion, with 18 males and 10 female opting for teaching it as a separate subject, whilst 4 males and 4 females preferred teaching it as a component of the current science subjects. Although their knowledge is usually considered low, the traditional healers were aware of what science is. One male traditional healer emphasized "Science is that subject concerned with studies in medicine and pharmaceutical industry, so let our children learn our traditional medicine as well". It is obvious that traditional healers know what they are doing and may not intent to share their knowledge with the public (Chavhunduka, 1999). Traditional healers just lack theoretical explanation on the chemistry of the drugs they use and this cannot be equated with ignorance (Kazembe and Mashoko, 2008).

Table 9: Traditional healers' views on teaching of traditional medicine in schools

Course of development model	Males	Females	Totals	Males %	Females %	Totals %
Inclusion in school curriculum	16	13	29	55.2	44.8	80.6
Inclusion in science subjects	6	1	7	85.7	14.3	19.4
Teaching as:						
(a) separate subjects	18	10	28	64.3	35.7	77.8
(b) part of current sc. subjects	4	4	8	50	50.0	22.2

The traditional healers who felt that traditional medicine should be taught as a separate subject emphasized that integration that the western medicines would pollute traditional medicines with their odours. They added that the inclusive model would overshadow the content, practices, rituals and spiritual aspects that strengthen the management and administration of traditional medicine.

Views of medical personnel on traditional healers and the teaching model

Interviews with the 6 medical doctors, 3 pharmacists, and 15 nurses revealed that they were aware of the claims of traditional healers. However, only 1 medical doctor stated that traditional medicine was able to treat cases of cancer, depressed fontanels, hysteria and malaria. He, however, emphasized the need for research to document its efficacy. The other 5 appeared lukewarm in their approach.

All medical personnel agreed that traditional medicine had been neglected and suppressed and emphasized the need to develop it through the secondary school system. They felt it had to be integrated into the science curriculum and should not be

taught as an independent subject. They added that including it into existing science subjects would be reconciliatory and promoted a coexistent working spirit.

Tables 9 and 10 indicate that all traditional healers and medical personnel supported the introduction of traditional medicine into the secondary school system. Initially traditional healers did not support the idea. They supported it after they were satisfied that the whole discussion was on making people know and appreciate the works of traditional healers and it was not a proposal to train traditional healers through the school system. This confusion was not limited to traditional healers. Some medical doctors and nurses also felt that traditional medical practitioners could be trained through the school system. This would not be possible since most aspects are so personal that mass production would not be possible. Herbal medicines can be learnt, but the rest would be impossible to teach. However, the majority of the medical personnel acknowledged that there were benefits accruable from teaching traditional medicine in schools. Benefits such as (a) restoration drive and appreciation of cultural practices, (b) improvement of efficacy of drugs, (c) improved accessibility of medical services, (d) enhancement of documentation of traditional medicines and (e) strategy for a disciplined nation by enculturation into the African science culture were mentioned.

Table 10: Views of doctors, pharmacists and nurses on the teaching model

Development option	Doctors	Nurses	Pharmacists	Total	Percentage
Total engagement	6	16	6	28	100
Development through school					
(a) agreed	3	12	6	21	75.0
(b) disagreed	3	4	0	7	25.0
Dev. as an independent subject					
(a) agreed	0	3	2	5	17.9
(b) disagreed	6	13	4	23	82.1
Inclusion into existing subjects					
(a) agreed	6	13	4	23	82.1
(b) disagreed	0	3	2	5	17.9
Integration into medical system					
(a) agreed	5	10	5	20	71.4
(b) disagreed	1	6	1	8	28.6

Characteristics of students and their views on teaching traditional medicine

Forty-two A-level chemistry students, comprising of 12 whites and 30 non-white Zimbabweans took part in the interviews after being probed with questionnaires. Students were able to explain what traditional medicine is all about, indicating that they had prior knowledge which could be employed by teachers in their lesson preparations. They were aware of different plants and animal products used by traditional healers in their practices. They got the knowledge through interactions with parents, grandparents, neighbours, peers and the media. Only 4 of the 42 had actually seen a traditional healer at work. The rest only saw them on television. Most of the students could distinguish the scientific aspects of traditional medicine from the metaphysical aspects involving spirits and emphasized the need to teach the subject at schools to enable comprehensive research on the chemistry of the medicines. Twelve of the 14 male students said that traditional medicines were efficacious, citing their ability to cure cancer, nose bleeding and AIDS which western medicine was unable to do. One student narrated how he had suffered from nose bleeding for years, visiting hospitals and clinics and failing to attend classes for 2 terms in grade 3. The problem

stopped after his grandmother took him to a traditional healer who gave him herbs to burn and inhale the smoke. The students supported inclusion of traditional medicine into the curriculum, teaching it as a separate subject or integrating it into existing subjects such as the core chemistry syllabus or as an independent option topic.

Characteristics and views of chemistry teachers

The 10 A-level teachers interviewed (6 males and 4 females) were university graduates with teaching experiences ranging from 2 to over 10 years.

Table 11: Qualifications of teachers

Qualification	Males	Females	Totals	Males %	Females %	Totals %
BSc general	1	2	3	33.3	66.7	30
BSc education	2	0	2	100.0	0.0	20
B Ed	2	0	2	100.0	0.0	20
MB CHB	1	0	1	100.0	0.0	10
B Tech	0	1	1	0.0	100.0	10
BSc nutritional sciences	0	1	1	0.0	100.0	10
Totals	**6**	**4**	**10**			**100**

Table 12: Chemistry teachers' views on traditional medicine and how it should be taught

Attribute	Males	Females	Totals	Males %	Females %	Totals %
Know & have used them	6	4	10	60.0	40.0	100
Scientific & hygienic	4	3	7	57.1	42.9	70
Unscientific & unhygienic	2	1	3	66.7	33.3	30
Integrate into chemistry	5	4	9	55.6	44.4	90
Independent or separately	1	0	1	100.0		10

All teachers emphasized that traditional medicines were good for body building and had no side effects because they were not purified and "targeted" for particular body cells. One of the teachers was a medical student on vacation. They all lamented the lack of documentation of traditional medicines. That the teachers' and students' views were complementary indicated that the teacher-student interactions would lead to meaningful learning in traditional medicine classes. The teachers added that inclusion would also benefit chemistry as it would help develop concepts like extraction, purification, and synthesis, as well as correct misconceptions. They said the most portrayed misconception was that biomedicines were created in the laboratories. They added that inclusion would help students develop interest on traditional medicines research, citing Chinese and the Japanese examples. The male teacher who proposed to teach traditional medicine as a separate subject argued that inclusion into existing subjects would confuse students. However, the majority of students (71%) and teachers (90%) preferred inclusion into chemistry.

Characteristics and views of influential stakeholders

Views of parents, patients who had been treated by traditional healers, ministers of religion, influential persons, local administrators, chiefs, councillors, and Heads of High Schools and Heads of Science Departments were collected using interviews. The parents were interviewed at their homes and their views matched with those of their children who had been interviewed at schools. Ministers of religion were invited to air their views as the ministers are critical of the activities of African cultural practices

(Bourdillion, 1987). Even these supported teaching of traditional medicine at schools. Parents supported the proposal to teach the content of traditional medicine in schools using an inclusive or co-existence model. They feared that a separate subject centred approach might lead to their children becoming traditional healers. However, that fear might be unfounded since becoming a traditional healer requires the intervention of spirits and that cannot happen through learning at school.

The Headmasters and Heads of Science Departments agreed to include traditional medicine in the schools curricula, but emphasized that the subject had to be optional.

Table 13: Summary of distribution of views on how traditional medicine should be taught

Stakeholder	Include in chemistry	Teach separately	Totals	Inclusion %	Separately %	Totals %
General populace	61	8	69	88.4	11.6	37.3
Medical doctors	6	0	6	100.0	0.0	3.2
Nurses	13	3	16	81.3	18.7	8.7
Pharmacists	4	2	6	66.7	33.3	3.2
Traditional healers	8	28	36	22.2	77.8	19.5
Chemistry teachers	9	1	10	90.0	10.0	5.4
Chemistry students	32	10	42	76.2	23.8	22.7
Totals	**133**	**52**	**185**			**100.0**

Conclusion

Thus traditional practitioners get their powers from spirits. The subject could be taught in schools after the relevant ministries have arrayed the fears of traditional healers. The process of including traditional medicine into the school curriculum could be started by the department of traditional medicine in the Ministry of Health and Child Welfare, in liaison with the Ministry of Education, Arts, Sports and Culture, proposing a draft syllabus for secondary schools with emphasis on herbal plants. Universities could assist the process by intensifying research on the natural products chemistry of local medicinal plants to create a data base which may be used by teachers. Literature on the chemistry of local medicinal plants is still very scarce. The answers to the research questions have been furnished and a case for the inclusion of traditional medicine in the school curriculum has thus been made.

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Appendix 1
Interview guide for traditional healers and herbalists

1. Name:
2. Physical address and cell number:
3. Would you describe how and when you started being a traditional healer?
4. Sources of healing power
   a) Would you describe where your healing power comes from eg shave, mudzimu, gombwe?
   b) How do shave, mudzimu and Gombwe differ?
   c) Do spirits warn the medium before a mistake is made?
   d) List types of mashave and their types of mediums.
   e) What roles do shave and mudzimu play in the healing process?
   f) Are you aware of Gombwe?
   g) Can you give examples and names of hakata?
   h) Do you refer patients to hospitals if their cases are difficult for you?
   i) How do you compare yourself to a doctor?
5. Diseases Treated
   a) What types of disease do you treat and what are the sources of your medication?
   b) Can you show us examples of your medication?
6. Inclusion of traditional medicine in the science curriculum
   a) What are your views about teaching traditional medicine in schools?
   b) What benefits do you think this idea would bring to the students and the nation?
   c) What aspects do you think can be taught to the students?

Appendix 2
Questionnaire cum interview guide for doctors, nurses and pharmacists

1. Name
2. Sex
3. Designation
4. a) What are your views on the use of traditional medicines for healthcare purposes?
   b) What are your views about collaboration between traditional healers and doctors?
   c) What are the differences between traditional medicine and the mainstream system?
   d) Are you aware of any complaints treated successfully by traditional medicines?
5. a) Have you ever seen a traditional healer at work?
   b) Do you regard traditional medicine as scientific?
   c) Do you think there are benefits from traditional healers and doctors collaborating?
6. a) What are your views about including traditional medicine into the school system?
   b) What are the benefits of the inclusion?
   c) Which subject should traditional medicine is combined with?
   d) Should it be taught as a separate subject?

Appendix 3
Questionnaire cum interview guide for chemistry teachers, students, and heads of science department

1. Name
2. Sex
3. Qualifications: Academic professional
4. What are your views about traditional medicines for healthcare?
5. Do you regard traditional medicines as scientific?
6. Are you aware of any complaints treated successfully by traditional medicines?
7. What are your ideas on including content of traditional medicine into curriculum?
   a) As part of science subjects?
   b) As a separate subject?
8. At what level do you think traditional medicine should start being taught?
9. What benefits do you think students will gain from the inclusion?
10. What are your views on collaboration between traditional healers and doctors?