Chapter 1

INTRODUCTION AND BACKGROUND

~~*"We cannot win the fight against AIDS if we do not also fight TB. TB is often a death sentence for people with AIDS". (Nelson Mandela XV International AIDS conference, Bangkok July 04: Quoted by EQUI-TB, 2004)*~~

1.1 Introduction

Formatted: Font: Bold

Developing countries are faced with a lot of social, economic, and demographic challenges and problems that include high mortality levels resulting in low life expectancy. Recent statistics still show huge disparities in mortality levels between the developed and developing countries. For example, as of 2010, Africa had an infant mortality rate of 76 compared to 6 each for Europe and Northern America. Life expectancies for these areas were 55, 76, and78 respectively (Population reference Bureau and USAID, 2010). High mortality levels in developing countries are as a result of various factors that include high prevalence of preventable and curable diseases such as malaria, diarrhoea, HIV/AIDS and tuberculosis (TB). Deaths from these diseases have been exacerbated by the emergence of the Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS).

A relatively understudied and less explored cause of death in Africa and Zambia in particular is TB. According to the World Health Organisation (WHO, 2004:7), tuberculosis remains an important but neglected cause of adult and childhood morbidity and mortality in the African region and yet, since its discovery, TB has continued to kill millions of people.

Formatted: Font: Bold

Formatted: Line spacing: single

1.2 Background

Current estimates indicate that one-third of the world's population is infected with mycobacterium tuberculosis, and that each year 9 million people develop TB, of whom about 2 million die. Of the 9 million annual TB cases, one million occur in children under the age of 15 years. Worldwide, the reported percentage of all TB cases occurring varies from 3 percent to over 25 percent (WHO, 2006:1). ~~percentpercentpercent~~

While TB has been in existence for a long time, Africa has experienced a huge upsurge in the incidence of tuberculosis cases and deaths especially in the past decade largely due to direct impact of the HIV/AIDS pandemic (WHO, 2004). Between 1990 and 2005, tuberculosis incidence rates tripled in African countries with high HIV prevalence. In 2007, Africa accounted for an estimated 78 percent of tuberculosis cases among HIV-positive people worldwide (http://www.avert.org/tuberculosis.htm). As of 2007, the USAID reports that 70 percent of all new TB patients in Zambia were co-infected with HIV, and Zambia had the seventh highest rate for prevalence of co-infection rate in the world. The estimated HIV prevalence rate of 14.3 percent in the adult population has made TB treatment difficult (http://www.usaid.gov/our_work/global_health/id/tuberculosis).

According to the National Collaborative Centre for Chronic Conditions (NCCCC, 2006), almost all cases of TB are preventable and all people with TB can be cured

and cured completely if they take their medication every day and complete the course. In 1994 an internationally recommended strategy for TB control, later named DOTS, was developed and launched by the WHO and the International Union against TB and Disease. DOTS stands for Directly Observed Treatment Short-Course. What this means is that there is someone on hand to observe and record patients swallowing the full course of the correct dosage of anti-TB medicine.

TB is caused by a bacterium called *mycobacterium tuberculosis*. The TB bacterium was discovered in 1882. In 1900 there was the first TB epidemic in Europe and the Americas. According to the Foundation for Innovative New Diagnostics (FIND), in 1945, the first TB drug was discovered and towards the 1990's there was a second TB epidemic in Asia and Africa prompting the WHO to declare TB a global emergency (FIND, p4).

Tuberculosis is categorised in two forms; Pulmonary and extra pulmonary tuberculosis (EPTB). Pulmonary tuberculosis is the common presentation of TB that affects the lungs. Its typical symptoms include chronic cough, weight loss, intermittent fever, night sweats and coughing blood (NCCCC, 2006). On the other hand, extra pulmonary TB (EPTB) is used to describe any other kind of TB affecting any other parts of the body other than the lungs. Patients with EPTB may manifest constitutional symptoms such as fever, anorexia, weight loss, malaise and fatigue. Extra pulmonary tuberculosis manifests signs and symptoms in relation to the body organ affected. The types of EPTB according to the organ involved include lymph node tuberculosis; abdominal tuberculosis; neurological tuberculosis; and bone and

joint tuberculosis. Others are genitourinary tuberculosis; female genital tuberculosis; and tuberculosis of the breast (Sharma and Mohan, 2004).

Studies on prevalence have revealed that the dominant form of tuberculosis is pulmonary TB. However, with the emergence of HIV/AIDS has emerged extra pulmonary TB and is said to be more common in HIV infected patients and children (Medicine San Frontiers, 2009). In the study by Phongsamart, *et al* (2009) among children in Canada, Pulmonary TB was found in 77.7 percent of the patients examined while extra pulmonary TB was found in 23.5 percent, 35.0 percent, and 37.0 percent of young children (0-4 years), older children (5-12 years), and adolescents (13-17 years), respectively. Bonnet, et al (2006) in their study based on data from Cambodia, Thailand, Kenya, Malawi and Cameroon found overall prevalence rates of 62.3 percent of pulmonary TB and 54.9 percent of extra-pulmonary TB.

It is a fact that in most African countries which include Zambia, most peo consider traditional medicine in case of sickness as priority. Further more, Zambia has seen an increase in the number of traditional healers especially with the emergence of HIV/AIDS. For this reason, there is need for an integrated e addressing the scourge of TB that should include all sectors of society including traditional healers. To this effect, the Ministry of Health in Zambia has made an effort to try and integrate traditional healers in disease management by holding meetings with traditional healers. For example, since 1999, the MOH in conjunction with the Zambia Integrated health Program (ZIHP) has been working and holding

Formatted: Font: Times New Roman

Formatted: Font: Times New Roman

Formatted: Font: Times New Roman

meetings with traditional healers in the districts of Mwense, Samfya, Kasama, Lundazi and Chipata aimed at improving disease management (Central Board of Health, 2003: vi). Through these consultative meetings, training manuals have been developed and some training workshops are reported to have been held (Central Board of Health, 2003: VI). Whether these meetings and training workshops have achieved their intended purpose especially in TB management still needs further investigation. And it is against this background that this study was undertaken

Formatted: Font: Times New Roman

1.31 Statement of the problem

It is estimated that 80 percent of people in low and middle-income countries rely primarily on traditional medicine for their health care needs. In East Africa, the majority of the population have access only to traditional health care (UNAIDS, 2002). In South Africa, a study by Pukree *et al* (2002) revealed that 70 percent of the patients who visited traditional healers would consult traditional healers as a first choice. It was also found in the study that a significantly large number of patients consulted traditional healers for potentially life-threatening conditions. In a study conducted in Kalabo district of Zambia, it was found that 88 percent of the respondents will visit a traditional healer in case they fall ill (Stekelenburg *et al*, 2005). Kofi-Tsekpo (2004) argues that the frequently quoted statement that 85 per cent of the people in Africa use traditional medicine is an understatement because this figure is much higher and continues to increase.

Despite the fact that most people in Africa visit and are more likely to visit traditional healers in case of illness, very few studies have been done to establish the knowledge, practices, beliefs and involvement of traditional healers in the fight against TB. In Zambia, there is dearth of information on the knowledge of TB and its management among traditional healers. Reviewed literature shows that no study like this one has ever been conducted before, hence the need to fill this gap.

1.42 Rationale

Mortality from preventable and curable diseases such as TB can be reduced drastically if all players are involved and if there is enough information to enable the integration of all key players in disease management. Information on the knowledge and practices of traditional healers on disease management is scanty in Zambia. The findings of this study are, therefore, critical in providing the necessary information on what traditional healers know about TB and how they manage TB cases. This information is relevant in policy development for government's health planners, traditional healers' associations, and NGO's. Furthermore, the findings of this study should make traditional healers' organisations and other players appreciate and understand the challenges that traditional healers face in the management of TB and will enable all players to devisee ways of how traditional healers can be assisted. The findings from this study may also contribute in the theoretical understanding of human behaviour as regards disease management. The study may also inspire further research into the problem and may thus form a basis for a much larger study.

1.~~3~~5 Research objectives

General Objective

The general objective of the study was to explore the role of traditional healers in the management of TB in Zambia.

Specific Objectives

The main specific objectives of the study were to:

1. Examine the knowledge levels of tuberculosis among traditional healers; presentations of TB, signs and symptoms, its mode of transmission, and prevention.
2. Establish the number of suspected TB cases that traditional healers attend to.
3. Examine the management practices of TB among traditional healers.
4. Investigate the extent of collaboration and/or willingness to collaborate with conventional health institutions in the management of TB.
5. Investigate challenges/obstacles that may be hindering effective collaboration with the conventional health sector in the management of TB.
6. Investigate the willingness of traditional healers to participate in the DOTS program as treatment supervisors.
6.

Formatted: Indent: Left: -0.5", No bullets or numbering

1.6 Definition of concepts

a. ***Traditional healers-*** Refers to health practitioners who are recogn their communities as being capable to practice health care through th plant, animal and/or mineral based medicines, spiritual therapies, techniques and exercise applied singularly or in combination. They spiritualists and herbalists

b. ***Management practices-*** This refers to the way the disease (TB) is h This includes the way the disease is diagnosed and treated. It also i referral systems in place. In TB management, it also includes monito swallowing of TB drugs (DOTS) and care for TB patients.

c. ***Conventional health institutions-*** This refers to modern clinics and where medical care is provided using modern medicine.

d. ***Treatment supervisors-*** This refers to people who monitor the swallo TB drugs by TB patients and care for the patients.

Formatted: Font: Italic
Formatted: List Paragraph, Justified, Numbered + Level: 1 + Numbering Style: a, b, c, … + Start at: 1 + Alignment: Left + Aligned at: -0.46" + Indent at: -0.21"
Formatted: Font: (Default) Times New Roman, 12 pt, Not Italic
Formatted: Font: (Default) Times New Roman, 12 pt
Formatted: Font: (Default) Times New Roman, 12 pt, Not Italic
Formatted: Font: (Default) Times New Roman, 12 pt
Formatted: Font: (Default) Times New Roman, 12 pt, Not Italic
Formatted: Font: Not Bold
Formatted: Font: Italic
Formatted: Font: Not Bold
Formatted: Font: Italic
Formatted: Font: Not Bold
Formatted: Font: Italic
Formatted: Font: Not Bold

1.7 Research methodology

The research was a non-experimental cross-sectional descriptive study relying on both quantitative and qualitative data. ~~This is because t~~here was no random assignment of elements into the study and there was no manipulation.

1.74.1 Study site

The study was conducted in Zambia. Data were collected from two towns, Lusaka and Chipata. In these towns, traditional healers that practice within high density

residential areas were interviewed. The two districts were selected based on the fact that traditional healers are not concentrated in one area. Furthermore, the researcher is conversant with the local languages used in the two towns which was a critical factor in communicating with the respondents. Lusaka and Chipata are also among the towns in Zambia with high economic activities thereby making them ideal business places for traditional healers. Also, the townships from which the healers were sampled have the highest concentration of traditional healers according to the informant from the Traditional Health Practitioners Association of Zambia (THPAZ) and high density areas are most prone to TB which thrives in inadequately ventilated housing units.

1.74.2 Study Population and sampling

Data were collected from Traditional healers. Due to time and resource constraints the researcher initially targeted 120 traditional healers but ended up with a sample of 100 because some of the traditional healers were reluctant to be interviewed, while others told the researcher to come back, but could not be found upon the researcher's return. The major that was reason given by traditional healers who were reluctant to be interviewed was that they were not comfortable sharing their knowledge with the researcher because they didn't know for sure where the information was going to end up. This however, did not happen frequently enough to be of serious concern since the majority of the traditional healers who were approached were willing to be interviewed. Non-probability sampling technique, the Snowballing method, was used to reach the sample of 100 traditional healers. The Snowball technique was

considered appropriate because there was no complete list of traditional healers at the time, as such, a few were identified and the sample was built from the few identified. Branch leaders of THPAZ were the first to be identified because their contact details were available at the THPAZ secretariat. The identified leaders directed the researcher to some healers they knew who equally identified other healers. Some of the disadvantages of this sampling method are that it is not possible to generalise findings to the entire population and bias may be present especially considering the fact that some potential respondents did were not interviewed.

1.74.3 Data Collection

A semi-structured questionnaire containing both open ended and closed-ended questions was developed to capture both quantitative and qualitative data. Open-ended questions were important as they allowed for the full expression of the respondents on the topic. Due to the complexity of the subject matter, and the sensitivity of the information, data were collected sorely by the researcher through direct interviews. The data obtained from interviews was edited and verified while in the field. Transcripts of all interviews were checked for accuracy.

1.74.4 Data processing, analysis and presentation

Quantitative data were entered and analysed using the Statistical Package for Social Sciences (SPSS) version 12.0. The quantitative results are presented in frequency tables and charts. Qualitative data from open-ended questions were analyzed using a thematic procedure and presented as narratives/or excerpts after being translated

from vernacular into English. Most of the interviews were conducted in Nyanja and Bemba languages in which the researcher is conversant with. As such, it was easy to translate from vernacular to English and ~~E~~every effort was however made to retain the original meaning of the verbal accounts as provided by the respondent.

1.7.5 ~~1.4.5~~ Ethical Consideration and Approval

Formatted: Font: Bold

The research took into account the right to privacy of the respondents. Respondents were informed on the purpose and nature of the study and that though the research was an academic exercise, it could also be helpful in improving the management of TB in the country; as such interviews only proceeded ~~I~~ with direct consent of the respondents~~f~~. If a respondent refused to be interviewed they were not forced. ~~Interviews only proceeded with direct consent of the respondents.~~ Anonymity of the respondents was also taken into consideration in that the names of respondents were omitted so as to give confidence to the respondent. Above all, the interview data were treated with utmost confidentiality as it was used for the stated purpose and no other person had access to the data. Permission to interview members of THPAZ was sought from the association's secretariat that sanctioned the study.

1.7.6 Limitations

Formatted: Normal, Indent: Left: -0.75", No bullets or numbering

Formatted: Font: Bold

~~**Limitations**~~

The major limitation of the study, as pointed out earlier, was the fact that some respondents refused to be interviewed. Also, while the majority accepted to be interviewed, they were reluctant for various reasons to provide information on some aspects of their management practices (disclosing of the remedies/herbs used in the

treatment of TB). If traditional healers and traditional medicine is to be integrated into the management of TB, like has been with HIV/AIDS, information on the herbs used is important as this will allow for efficacy tests on the herbs. Non-disclosure of the medicines used also makes it completely impossible to qualify the claim that traditional healers are able to treat TB because if there was disclosure, we were going to look at the frequency of the herbs mentioned.

1.58 Theoretical framework

This study was guided by the Theory of Reasoned Action (TRA)/Theory of Planned Behaviour (TPB). The theory of planned behaviour originated in the field of social psychology and was developed in 1988 by Icek Ajzen and Martin Fishbein. This theory evolved from an earlier theory, Theory of Reasoned Action (TRA) that was developed in 1967 and "It describes intention as the best predictor of whether or not a health behavior is performed" (Montano & Kaspryzk, 2008). The theory was later revised and expanded by Ajzen and Fishbein in the early 1970's and over the years, the TRA/TPB has evolved as a theory used to study human behaviour and develop appropriate intervention.

This theory is based on two assumptions; human beings are rational and make systematic use of information available to them; and that people consider the implications of their actions before they decide to engage or not engage in certain behaviours. According to this theory, the most important determinant of behaviour is behaviour intent. This is a combination of attitude and subjective norm. The major difference between TRA and TPB is the addition of a third determinant of

behavioural intent in TPB which is perceived behavioural control. The following are the definitions of the key concepts of the theory.

a. **Behaviour**- The transmission of intention into action.

b. **Behaviour intent**- Is the indication of how hard people are willing to try and of how much an effort they are planning to exert, in order to perform the behaviour.

c. **Attitude**- The individual's positive or negative belief about performing a specific behaviour.

d. **Subjective norm**- The influence of social pressure that is perceived by the individual.

e. **Perceived behavioural control**- The individual's belief concerning how easy or difficult performing the behaviour will be or the degree to which an individual feels that performance or non-performance of the behaviour in question is under his or her volitional control.

In understanding the knowledge, practices and involvement of traditional healers in the management of TB, the Theory of Reasoned Action/Theory of Planned Behaviour is relevant because traditional healers are rational human beings and if information on TB and its management is provided to them, they are likely to make systematic use of this information. Furthermore, they ought to consider the implications of their actions before they decide to engage or not to engage in certain behaviours.

From the above, an example of health behaviour in TB management among traditional healers is treatment of suspected TB cases vis-a-vis referring of suspected

TB cases to conventional health institutions. If information on TB management is made available to traditional healers, they ought to make systematic use of this information and ought to consider the implications of treating suspected TB cases or referring them to the hospital. This will be determined by the negative or positive belief about treating the suspect or referring them to the hospital (attitude). In the event that a traditional healer believes that they can effectively treat TB, then they will most likely treat the suspect and not refer them to hospital and vice versa. The best management practice expected of traditional healers in TB treatment by government or other players could be said to be the subjective norm. On the third determinant of perceived behavioural control, this could be the belief concerning how easy or difficult the action of treating TB suspects vis-a-vis referring TB suspects to hospital will be.

To sum up, from the above discussion, the key component of the theory that can be identified in understanding the role of traditional healers in the management of TB is information dissemination. Availability of information will determine their action and behaviour by operating through the three identified antecedents to behaviour. The following figure summarizes the above discussion.

Chapter 2

LITERATURE REVIEW

2.1 Knowledge of TB

A number of studies have been done around the world to establish ~~K~~knowledge, attitudes and practices towards TB. These studies have mostly been conducted among the general population and medical practitioners (E. Johansson *et al*, 1995; Bonnet *et al,* 2006; Hoa *et al* 2009; Koay, T.K. *et al* 2004; Nguyen *et al,* 1999; Hashim D.S. *et al,* 2003; Mangesho P.E. et al, 2007; Mweemba, P. 2008; EQUI-TB Zambia, 2003; Muhammad *et al* 2006; Hong *et al* 2004; Vijayaraman *et al,* 1998; Manalo *et al,* 2000).

Most of the studies on knowledge, attitudes and practices of TB have reported relatively low levels of knowledge about TB among the majority of the general populations as well as sub-populations. For example, the ~~S~~study by Mweemba, *et al* (2008) reports around 50 percent knowledge levels while the study by Equi-TB (2003) reports knowledge levels of 60 percent among prison officers. Koay, *et al* (2004), concluded that knowledge of Tuberculosis among the population was

generally poor. In their study among the people living in Kudat district- ,-Sabah, Malaysia, they found that only 51 percent of the respondents thought that the disease was caused by germs and it was transmitted by air.

Some studies have been done to establish the knowledge levels of traditional healers on TB. In a study conducted by Peltzer *et al* (2006) in South Africa, it was found that 81percent81 percent knew the transmission route of TB, which is breathing the air around a person who is sick with TB. It was also found that many had misconceptions about TB transmission such that 85 percent believed it is possible to get TB from smoking, and 65 percent from mosquito or other insect bites.

2.2 Management of TB

Largely, studies done among medical practitioners have been in the management and knowledge of TB. The majority of the studies have revealed poor management of TB cases among most medical practitioners. Phongsamart *et al*, (2009), found that 66.1 percent patients received directly observed therapy (DOT). Prescribed treatment was completed in 86.8 percent patients with a trend toward higher completion rates in those receiving DOT (P = 0.07). They concluded that one-third of patients did not receive DOT and most were cared for by physicians with limited experience in managing TB. A population based survey on knowledge, attitudes and practices for tuberculosis among general practitioners in Korea conducted by Hong *et al* (2004) found that 50 percent of the respondents did not consider sputum examination essential in case finding/diagnosis, and 75 percent in monitoring of treatment response. As for treatment, 89 percent were giving either non-recommendable

regimens or bad regimens. In the conclusion sputum examinations were considerably neglected in case finding/diagnosis and treatment monitoring.

Muhammad et al, (2006), did a similar study in India and found that only 32 percent of the doctors knew the correct regiment for treatment of childhood tuberculosis although the majority of the doctors answered correctly about the symptoms and signs. It was concluded in the study that knowledge among doctors on management of tuberculosis was inadequate.

Hashim et al, (2003) did a study in Iraqi where they found that 95.5 percent of the health care workers had good knowledge about TB and this was significantly associated with age and job duration. Further more, they discovered that in contrast, health care workers' practice was poor as only 38.2 percent handled suspected TB cases correctly. In a study by Marzieh (2003) done in Karaj city Iran regarding TB programmes, it was found that only ~~1.8 percent of the general physicians interviewed had satisfactory level of knowledge of the programmes,~~ 27.1 percent knew the most important symptom of pulmonary TB and ~~,~~ 43 percent recalled the short course of four-drug treatment.

Similar studies have been done in various countries in Africa. For example, Ayaya *et al* (2003) did a study among Private Medical Practitioners in Kenya on their knowledge, attitudes, and practices on tuberculosis among HIV / AIDS patients in Eldoret. From their findings, they concluded that most doctors were not aware of the

correct diagnosis and treatment of TB and many used unrecommended treatment regimes. They also concluded that most doctors did not know the definitions of the various re-treatment cases. Lisa Cranmer did a situational analysis of paediatric HIV/TB in Ethiopia in 2008. It was found in this study that medical practitioners were not following the recommended guidelines of diagnosis (Cranmer, 2008). In a study by Busari et al, (2008) in Nigeria, it was found that 88.1 percent of the medical interns interviewed knew that droplet infection was the usual mode of TB transmission. Only 27.1 percent could state correctly the definition of MDR-TB while none knew the definition of XDR-TB. Further–more, 62.7 percent identified Zeihl Neelsen staining for acid fast bacilli as the best diagnostic procedure for pulmonary TB. The recommended 4-drug anti-TB regimen was prescribed by 56.8 percent in the initiation phase and the recommended 2-drug combination in the continuation phase by 62.7 percent. In short, the study revealed gross inadequacies in TB knowledge and management practices among Nigerian medical interns.

Among traditional healers, few studies have been done to establish management practices of TB. For example, Colvin et al (2003) in South Africa conducted a study to assess the acceptability and effectiveness of traditional healers in the DOTS program.

The most important suggestions of the above literature review are that most studies conducted to investigate the knowledge, attitudes and management practices towards TB have been among the general population and medical health practitioners. Most

of these studies have revealed that knowledge levels of TB were generally lo among medical practitioners, and most medical practitioners exhibited poor management practices of TB. However, ~~very few~~a few studies have been done to establish knowledge of TB and its management among traditional healers who are providers of health in Africa. In Zambia, reviewed literature shows that there has been no attempt to make this investigation. This study therefore sought to close this knowledge gap.

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Chapter 3

FINDINGS

3.1 Characteristics of Respondents

This section presents findings on the background characteristics of the respondents interviewed in the study. Characteristics presented include socio-demographic characteristics, residence and classification of the healers. Also presented are the number of years practiced, commonly treated conditions and number of patients treated by traditional healers in the study sites.

3.1.1 Socio-Demographic characteristics

Table 1 shows that ~~the~~ majority (80 percent) of the respondents interviewed were aged between 35 and 64 years. The oldest respondent was 93 years old while the youngest was 25 years old. Half of the respondents were aged below 51.5 years old. Six in every ten (62 percent) of the respondent were female. Education levels were found to be low among the respondents. Of the ~~74 percent of the~~ respondents who indicated having been to school ~~of whom~~, 59 percent reported having~~had~~ attained only primary education while slightly more than~~.~~ ~~About~~ a quarter~~,~~ (26 percent) indicated that they had never been to school. In short, 85 percent of the respondents had never attained a level of education beyond primary school and only 15 percent had attained secondary level of education. Sixty (60 percent) of the respondents were recruited from Lusaka and forty (40 percent) from Chipata.

Respondents interviewed included spiritual faith healers/spiritualists (78 percent), and herbalists (22 percent).

***Table 1**: Number and percent distribution of respondents by selected background characteristics*

Formatted Table

	Background Characteristics	Number	Percent
Age group			
25-34		3	3.0
35-44		18	18.0
45-54		38	38.0
55-64		24	24.0
65-74		9	9.0
75-84		4	4.0
85+		4	4.0

Sex		
Male	38	38.0
Female	62	62.0
Residence		
Lusaka	**60**	**60.0**
Chipata Township	29	29.0
George Township	20	20.0
Mtendere Township	8	8.0
Chaisa Township	3	3.0
Chipata	**40**	**40.0**
Mchini Township	15	15.0
Referendum Township	10	10.0
Navutika Township	8	8.0
Jere Township	7	7.0
Educational attainment		
No education	26	26.0
Primary	59	59.0
Secondary	15	15.0
Type of Healer		
Spiritual faith healers/spiritualists	78	78.0
Herbalists	22	22.0
Total	**100**	**100.0**
Median age= 51.5 years		

Spiritual faith healers interviewed claimed to represent God and that the spirits that possess their bodies are *'holy'*. On the other hand, the other group (spiritualists) claim to be possessed by spirits that could be said to be *'demonic~~demonic~~'*. In disease management, these groups claim that they seek the guidance of spirits to diagnose and use herbal medicine to treat ailments. On the other hand, herbalists usually do not rely on any form of medium to guide them in their work. These claim to have learnt the herbs from their parents, other relatives or friends, and through

long practice they claim to have mastered particular herbs used in the treatment of various ailments.

3.1.2 Number of years of practice

It was found that the majority (86 percent) of the respondents interviewed had been practicing for 10-49 years **(Table 2)**. The average number of years of practice was 26.7 years.

Table 2: *Number and percent distribution of respondents by the number of years of practice*

Years Practiced	Number	Percent
1-9	7	7.0
10-19	27	27.0
20-29	31	31.0
30-39	17	17.0
40-49	11	11.0
50-59	3	3.0
60-69	1	1.0
70+	3	3.0
Total	**100**	**100.0**
Mean= 26.7		

Formatted Table

Formatted: None, Indent: Left: 0", Space Before: 0 pt, Don't keep with next, Don't keep lines together

3.1.3 Number of patients/clients received daily

It was reported by 22 percent of the respondents that in most cases a day goes by without receiving any patient/client. A large proportion~~Most of the respondents~~ (17 percent) of the respondents claimed that they receive five patients/clients per day seeking help for various problems. Interestingly, 3 percent of the respondents reported that they usually receive ~~forty~~40 to ~~one hundred~~100 patients/clients per day.

The average number of clients that seek help from traditional healers was found to be about 7 people (6.81) per day **(Table 3)**.

Table 3: *Number and percent distribution of respondents by the number of patients/clients received daily*

Formatted Table

Patients/clients received daily	Number	Percent
0	22	22.0
2	11	11.0
3	9	9.0
4	6	6.0
5	17	17.0
6	6	6.0
7	4	4.0
8	5	5.0
10	5	5.0
12	2	2.0
15	9	9.0
20	1	1.0
40	1	1.0
50	1	1.0
100	1	1.0
Total	**100**	**100.0**
Mean= 6.81		

3.1.4 Diseases/Conditions treated

The most frequently mentioned disease/condition by the traditional healers that they claim to be able to treat were STI's (11.5_percent), followed by Epilepsy and Impotency/Infertility (10_percent). The least mentioned were HIV/AIDS, fibroids and prolonged periods.

STI's were still the most frequently reported disease (15.3 percent) by the respondents for which people seek help and which they get treatment for. This was followed by Iinfertility and impotence (14.9 percent), and lucky charms/prevention charms/love portions (13.6 percent).

3.1.5 Attendance at workshops

Attendance at workshops was one background variable that was considered in the study. Respondents were asked if they had ever attended any training workshop on TB. According to Table 4, slightly more than half (54 percent) answered in the affirmative while the rest indicated they had not. More respondents (60 percent) from Lusaka indicated that they had attended training workshops compared to 45 percent from Chipata.

Table 4 also shows that most of the respondents (81.5 percent) claimed to have attended these workshops one year before this study was conducted and 83.3 percent claimed that the workshops were very useful. In response to a multiple response question, the contents of the training workshops were indicated to be: what TB is (90.7 percent), how TB can be prevented (55.6 percent), how TB can be transmitted (64.8 percent), how TB can be cured (48.1 percent) and the relationship between TB and HIV/AIDS (22.2 percent).

Table 4: *Number and percent distribution of respondents by attendance of tr workshops on TB, last time attended training workshop, usefulness of workshops and contents of workshops.*

	Number	Percent
Ever attended training workshop on TB	54	54.0

Formatted Table

Formatted: Font: 12 pt, Italic

Residence		
Lusaka	36	60.0
Chipata	18	45.0
How long ago attended last workshop		
Last month	14	25.9
Last year	30	55.6
More than a year ago	10	18.5
How useful was/were the workshop(s)		
Very useful	45	83.3
Useful	8	14.8
Not useful	1	1.9
Contents of training workshops		
What TB is	49	90.7
How TB can be transmitted	35	64.8
How TB can be prevented	30	55.6
How TB can be cured	26	48.1
The relationship between TB and HIV/AIDS	12	22.2
Total	**54**	**100.0**

Formatted Table
Formatted: Font: 12 pt, Italic
Formatted: Font: Italic
Formatted: Font: 12 pt, Italic
Formatted: Font: Italic
Formatted: Font: 12 pt, Italic
Formatted: Font: Italic

~~Table 4 also shows that most of the respondents (81.5percent) claimed to have attended these workshops one year before this study was conducted and 83.3 percent claimed that the workshops were very useful. In response to a multiple response question, the contents of the training workshops were reported to be: what TB is (90.7percent), how TB can be prevented (55.6percent), how TB can be transmitted (64.8percent), how TB can be cured (48.1percent) and the relationship between TB and HIV/AIDS (22.2percent).~~

3.2 Knowledge of TB and other sources of information

Respondents were asked if they had heard about TB and if they felt well informed about the disease. All the respondents (100 percent) reported that they had heard about the disease with more than 71 percent claiming that they felt well informed on the disease. Some of the local names for TB as reported by the respondents included the following: [1]*Chifuba chabefu, Chifuba chakaliondeonde, Chifuba chamulilo or Chifundilila, Chifuba chamankhololwa, Chifuba chamidulo, Ichifuba chamankowesha or kapopo, Ichifuba chantandabwanga.*

Table 5 shows the other sources of information for respondents that reported heard about TB~~be well informed about TB~~.

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Table 5: *Number and percent distribution of respondents by sources of information on TB*

Formatted Table

~~Major sources of information~~	Number N=10071	Percent
Clinic/hospital	40	40.056.3
Spirits	13	13.08.3
Radio	11	11.05.5
Newspaper/magazine	2	2.0.8
TV	2	2.08
Teachers (school)	2	2.08
Brochures/posters	1	1.04

Formatted Table

Note: Because multiple responses were given, the sum of responses may be <100

According to Table 5, the major source of information on TB reported by a large proportion ~~more than half ((5460~~.30 percent) of the respondents ~~of the respondents~~ were clinics/hospitals. Thirteen percent of the respondents ~~More than 18percent of the respondents~~ mentioned spirits as a source of information while some indicated that they got the information through radio~~s~~ (11.05.5 percent).

3.2.1 Knowledge of types of TB

In an open ended question, respondents were asked to mention the forms of TB they knew.

The following were some of the common responses:

> [2]*"Yolowewa (Bewitched TB) and yokhosomola (coughing)"*
> [3]*"Yamuchifuba (Chest TB) ~~and HIV~~and HIV (HIV/AIDS TB)"*
> [4]*"Yokhosomola (Coughing) and yamumabonzo (TB of the bones)"*
> [5]*"Yakubanja (inherited TB) and Iyabuchende (sexually transmitted TB)"*
> [6]*"Yakumakolo (olden days TB) and Yozitolela (sexually transmitted TB)"*

From the responses gathered, it can be seen that although there is an understanding of the existence of more than one presentation of TB, there are misconceptions on the presentations of TB that exist with emphasis being on the existence of sexually transmitted TB and the common TB that affects the lungs~~where someone coughs~~.

In trying to investigate further on this knowledge, respondents were asked to state the manifestations of extra-pulmonary TB that they were aware of. This was after a distinction was explained. Table 6 presents the findings.

Table 6: *Number and percent distribution of respondents by knowledge of the manifestations of extra pulmonary TB*

Formatted Table

	Number	Percent
	N=100	
Bone and joint TB	23	23.0
Neurological TB	9	9.0
Lymph node TB	6	6.0
Abdominal TB	4	4.0
Female genital TB	2	2.0

Formatted Table

Note: Because multiple responses were given, the sum of responses may be <100

From Table 6, it can be seen that extra-pulmonary TB and its manifestations is not known by most of the respondents. The most mentioned manifestation of extra-pulmonary TB was Bone and joint TB (23 percent). Neurological and lymph node TB were mentioned by 9 percent and 6 percent of the respondents respectively.

3.2.2 Knowledge of signs and symptoms of Pulmonary TB

As indicated earlier, ~~A~~active TB signs and symptoms include severe, persistent cough lasting longer than three weeks, a cough producing thick and/or bloody sputum, chest pain and/or shortness of breath, persistent weakness or fatigue, weight loss, poor appetite, chills, fever, and night sweats (Cichocki ~~(~~, 2007).

Respondents in this study were asked to identify~~in a multiple response question to state~~ the signs and symptoms of pulmonary TB that they knew. Table 7 shows the responses.

Table 7: *Number and percent distribution of respondents by knowledge of signs and ~~S~~symptoms of pulmonary TB*

Formatted Table

	Number	Percent
	N=100 ~~N=100~~	
Cough that lasts for more than four weeks	65	65
Appetite and weight loss	31	31.0
Difficulty in breathing	28	28.0
Coughing up blood	23	23.0
Fever	20	20.0
Night sweats	17	17.0
Chest pains	13	13.0
Ongoing fatigue	9	9.0

Formatted Table

Rush	5	5.0
Don't know	2	2.0

Note: Because multiple responses were given, the sum of responses may be >100

Findings in table 7 show that while most of the respondents ~~The most mentioned symptom of pulmonary TB by the respondents (65percent) was coughing that lasts for more than four weeks. Appetite and weight loss was identified by 31 percent; difficulty in breathing by 28 percent; coughing up blood was identified by 23 percent while night sweats were identified by only 17 percent of the respondents. These findings suggest that traditional healers are knowledgeable of the common symptoms of pulmonary TB. These indicate that while a larger proportion~~ (65 percent) ~~of the respondents~~ could correctly identify the most common symptom of pulmonary TB, very few could correctly identify other symptoms of pulmonary TB that include appetite and weight loss (31 percent), difficult in breathing (28 percent), coughing up blood (23 percent) and night sweats (17 percent).

Table 8 shows the relationship between attendance at workshops and educational level attained on one hand and knowledge of the most common symptoms of TB among the respondents on the other. The two background variables were considered to try and see their relationship with knowledge of TB due to the fact that ~~higher levels of~~ education imparts literacy which tends to improve one's basic knowl health related issues ~~enable one to read and understand consequently being up-to-date with current events and developments.~~ and because many traditional healers

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

claimed to have attended workshops at which various issues pertaining to TB were allegedly discussed. ~~Equally, workshops are a media of information dissen~~ ~~that allows for the interaction of participants and may thus be a superior media of information dissemination for a group of people whose education levels are minimal. Percentages indicated are those who correctly mentioned the common symptoms.~~

Table 8: *Number and percent distribution of respondents who mentioned some commo symptoms by attendance at workshops on TB and educational attainment.*

	Highest level of educational attainment			**Attended training workshop on TB**		
	No Education	Primary	Secondary	Yes	No	Total
Cough that lasts for more than three weeks	15 (57.7)	38 (64.4)	12 (80.0)	43 (79.6)	22 (47.8)	65 (65.0)
Coughing up blood	5 (19.2)	14 (23.7)	4 (26.7)	12 (22.2)	11 (23.9)	23 (23.0)
Appetite and weight loss	5 (19.2)	16 (27.1)	10 (66.7)	23 (42.6)	8 (17.4)	31 (31.0)
Night sweats	4 (15.4)	8 (13.6)	5 (33.3)	9 (16.7)	8 (17.4)	17 (17.0)
Total	**26 (26.0)**	**59 (59.0)**	**15 (15.0)**	**54 (54.0)**	**46 (46.0)**	**100 (100.0)**

From Table 8, it can be seen that 80 percent of the respondents who reported to have attained secondary education correctly indicated coughing for more than four weeks as a symptom of TB compared to 64.4 percent ~~for~~ among those who had attained primary education and 57.7 percent ~~for~~ among those with no education. Similar

observations can be ~~seen~~made ~~for~~with regard to other symptoms. For e appetite and weight loss as a symptom of TB was identified by ~~where~~ 66.7 of the respondents who had attained secondary education ~~indicated this sy~~ compared to only 19.2 percent and 27.1 percent ~~for~~among those with no ed and those with primary level of education respectively. A similar pattern w observed for coughing up blood as a symptom of TB. ~~respondents with education and 19.2 percent for those without education.~~ This shows that there is a positive effect of education attainment on the knowledge of common symptom~~s~~ of TB.

Attendance at workshops, just like education level attained, seems to be positively associated with knowledge of the main symptom of TB. For example~~With regard to workshop attendance~~, among those who claimed to have attended workshops on TB, almost 8 out of 10 (~~-~~79.6 percent) correctly identified a cough that lasts for more than three weeks as the major symptom of TB compared to approximately 48 percent (47.8 percent) among those who reportedly never attended any workshop.

~~of the respondents who had attended workshops on TB indicated this symptom compared to 47.8 percent for those who had never attended workshops. Si~~ ~~attendance of training workshops has a positive effect on the knowledge of common TB symptoms. For the symptom coughing up blood, observed differences by education attainment and attendance at workshops are not high being in the range of 19.2 percent and 26.7 percent. Knowledge levels for night sweats as a symptom for~~

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto

~~TB were below 20 percent except for respondents with secondary education where 33.3 percent indicated this symptom (**Table 8**).~~

3.2.3 Knowledge on transmission of pulmonary TB

The TB germ (*mycobacterium tuberculosis)* that commonly causes TB can be easily passed on from one person to another through the air. A person can become infected with TB when he or she inhales the TB germ. When a person with active TB coughs, sneezes, or exhales, infected water droplets are released into the air (Cichocki M, 2007). As such, infection occurs when other people inhale these droplets. TB is spread easily in housing conditions that are crowded and particularly not well ventilated.

Respondents in this study were asked ~~in a multiple response question to state how a person can get (contract) TB~~to identify modes of TB transmission. Findings are presented in Table 9.

Table 9: *Number and percent distribution of respondents by knowledge of ~~transmitted~~*

	Number N=100	
Breathing air contaminated with the TB germ	49	
Sharing eating utensils with someone who has TB	31	31.0
Having sexual intercourse with someone who has aborted	21	21.0
Having sexual intercourse with someone who has TB	13	13.0
Inherited	8	8.0
Having sexual intercourse with a woman having her monthly periods	8	8.0
A person can be bewitched	3	3.0
Kissing someone who has TB	3	3.0

Formatted: Font color: Auto
Formatted Table
Formatted: None, Indent: Left: 0", Right: 0", Space Before: 0 pt, Don't keep with next, Don't keep lines together
Formatted: Font: Bold
Formatted Table

Others		2	2.0

Note: Because multiple responses were given, the sum of responses may be >100

Less than half (49 percent) of the respondents were able to correctly~~correctly indicated~~ identify~~that~~ breathing air contaminated with the TB germ a~~i~~s the major mode of TB transmission~~ for TB~~. A lot of traditional healers identified modes of transmission that represent misconceptions. For example, ~~arger proporti~~ ~~misconceptions on how pulmonary TB can be transmitted. It was mentione~~ ~~percent~~ percent of the respondents indicated that sharing eating utensils with someone who has TB can transmit TB while others (~~. A large proportio~~ percent) identified sexual intercourse with someone who has aborted as a r TB transmission and 13 percent believed that sexual intercourse with a TB can transmit TB to the other person. ~~) indicated that TB can be sexually transmitted by sleeping with a woman who has aborted.~~ Other misconceptions were that ~~were that~~ TB can be transmitted by having sex with a woman having her m cycle (8 percent), that a person can inherit TB (8 percent), or that a person can be bewitched (3 percent)~~, can be inherited, can be transmitted by having intercourse with someone who has TB, having sex with a woman having her monthly periods, and that a person can be bewitched.~~

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Knowledge of modes of TB transmission also varied by level of educational as well as ~~by~~ attendance at workshops~~.~~ ~~(People who attend workshops and those with high levels of education are supposed to be more knowledgeable about modes of TB transmission. As already indicated, a large proportion of respondents indicated that~~

~~they had attended workshops and most of them mentioned modes of TB transmission as one of the topics covered in the workshops. Generally, one would expect this group of people to be more knowledgeable about modes of TB transmission than those who had not attended training workshops. Also, individuals with some level of education are more likely to be exposed to concrete information about TB transmission. Results on the relationship between knowledge of TB transmission and education attainment and workshop attendance are presented in~~ Table 10).

The proportion of respondents reporting correct knowledge of the main mode of TB transmission which is breathing air contaminated with TB germ increased with level of education from 30.8 percent among those without education to 54.2 percent and 60 percent among those with primary education and secondary education respectively. Similarly, ~~K~~knowledge of the main mode of TB transmissi varied by workshop attendance; those who reported having attended workshops were more likely than those who had not to correctly identify breathing air contaminated with the TB germ as the main mode of TB transmission (64.8 percent and 30.4 percent respectively).

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Misconceptions about TB transmission were also evident. For example, the proportion of respondents with misconceptions on TB transmission such as the misconception that TB can be transmitted through sexual intercourse with a woman who has had an abortion decreased with level of education from 23.1 percent among respondents without education to 22 percent and 13.3 percent among those with

primary education and secondary education respectively. This mode of transmission was also most likely to be mentioned by respondents who reported not to have attended training workshops on TB (23.9 percent) compared to those who reported to have attended training workshops on TB (18.5 percent).

Formatted: Not Highlight

Table 10: *Number and percent distribution of respondents who mentioned some TB transmission by attendance of workshops on TB and educational attainment.*

Formatted Table

Formatted: Font: 12 pt, Font color: Auto

Formatted: Font: 12 pt, Font color: Auto

	Highest level of educational attainment			**Attended training workshop on TB**		
	No Education	Primary	Secondary	Yes	No	**Total**
Breathing air contaminated with TB germ	8 (30.8)	32 (54.2)	9 (60.0)	35 (64.8)	14 (30.4)	49 (49.0)
Sharing eating utensils with someone who has TB	4 (15.4)	20 (33.9)	7 (46.7)	22 (40.7)	9 (19.6)	31 (31.0)
Having sexual intercourse with someone who has aborted	6 (23.1)	13 (22.0)	2 (13.3)	10 (18.5)	11 (23.9)	21 (21.0)

Having sexual intercourse with someone who has TB	1 (3.8)	8 (13.6)	4 (26.7)	5 (9.3)	8 (17.4)	13 (13.0)
Having sexual intercourse with a woman having her monthly periods	1(3.8~~percent~~	5 (8.5)	2 (13.3)	2 (3.7)	6 (13.0)	8 (8.0)
TB is inherited	3 (11.5)	5 (8.5)	0 (0.0)	5 (9.3)	3 (6.5)	8 (8.0)
A person can be bewitched	0 (0.0)	3 (5.1)	0 (0.0)	2 (3.7)	1 (2.2)	3 (3.0)
Kissing someone who has TB	0 (0.0)	1 (1.7)	2 (13.3)	3 (5.6)	0 (0.0)	3 (3.0)
Total	**26 (26.0)**	**59 (59.0)**	**15 (15.0)**	**54 (54.0)**	**46 (46.0)**	**100 (100.0)**

Formatted: Font: Bold

~~Similar observations were made for kissing someone who has TB. The proportion of respondents with misconceptions on TB transmission such as the misconception that TB can be transmitted through sexual intercourse with a woman who has had an abortion decreased with level of education from 23.1 percent among respondents without education to 22 percent and 13.3 percent among those with primary education and secondary education respectively. This mode of transmission was also most likely to be mentioned by respondents who reported not to have attended training workshops on TB (23.9percent) compared to those who reported to have attended training workshops on TB (18.5percent).~~

It is also worth noting that the proportions for the misconceptions that TB is transmitted through sexual intercourse with someone who has TB or a woman having her monthly periods increased with levels of education which is contradictory

with ~~what is ideally~~the expected. However, respondents who reported having attended training workshops on TB were less likely (9.3 percent and 3.7 percent respectively) to mention these modes of transmission than those who reported not to have attended training workshops on TB (17.4 percent and 13 percent respectively).

3.2.4 Knowledge on prevention of pulmonary TB

In the event of TB in a home, adequate ventilation of the house is the most effective way of preventing the spread of the TB germ to other members of the household~~.~~ (Cichock, (2007). ~~argues that using proper protective equipment, namely T masks and gowns that prevent the inhalation of infected droplets and avoidin around those who are infected can help you avoid TB.~~

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Respondents were asked ~~in a multiple response question~~ to identify ways through which TB transmission can be avoided.~~state how TB can be prevented.~~ Table 11 shows that only 29 percent of the respondents could correctly identify adequate ventilation of the house where a TB patient resides as one of the most effective ways for preventing TB transmission.

Probably, ~~A~~as a consequence of the misconceptions exhibited on the modes of TB transmission~~ for TB~~, some respondents also exhibited misconceptions on how to prevent TB~~ by mentioning that TB~~. For example, a number of respondents indicated use of condoms, avoiding sex with a TB patient or a woman having her menstrual cycle or one who has aborted as some of the ways to prevent TB infection.~~ can be~~

~~avoided by abstaining from sex or using condoms during sexual contact which is not correct. That is; by avoiding sex with someone who has TB (12percent), a~~ Formatted: Font: 12 pt, Font color: Auto

~~sex with a woman who is having her monthly periods (6percent) and avoiding sex with a woman who has aborted (11percent). It was also stated by 11 percent that TB can be prevented by using condoms when having sex.~~

~~stated that TB can be prevented by adequately ventilating the house in case of TB patient. Table 10 further shows that three in every ten of the respondents (34percent) stated that TB can be prevented by avoiding sharing eating utensils with someone who has TB.~~

Table 11: *Number and percent distribution of respondents by knowledge of how TB transmission can be prevented* Formatted Table

	Number	Percent
	N=100	Formatted: Font: Bold
Avoid sharing eating utensils with someone who has TB	34	34.0
Ventilating the house in case of TB	29	29.0
Avoid having sex with someone who has TB	12	12.0
Using condoms when having sex	11	11.0
Avoid sex with a woman who has aborted	11	11.0
Avoid sex with a woman having her monthly periods	6	6.0
Don't know	4	4.0
Using prevention charms	3	3.0
Avoid kissing	1	1.0

Note: Because multiple responses were given, the sum of responses may be >100

3.3 Management practices

TB is a disease that is curable if properly managed. Active tuberculosis can almost always be cured with a combination of antibiotics

(http://www.avert.org/tuberculosis). The exact drugs and length of treatment depend on one's age, overall health, possible drug resistance, the form of TB (latent or active) and its location in the body (http://www.mayoclinic.com/health/tuberculosis). Successful treatment and management of TB is also largely dependent on the compliance of the patient. Non-compliance to Tuberculosis treatment has contributed largely to the rise in incidence and prevalence because it is one of the principal causes of treatment failure (Mweemba *et al*, 2008).

3.3.1 Diagnosis of TB

Diagnosis of any disease precedes treatment and further management of the disease. TB is diagnosed at modern hospitals in several different ways. The most commonly used diagnostic tool for TB is a simple skin test where a small amount of a substance called PPD tuberculin is injected just below the skin of the inside forearm (http://www.mayoclinic.com/health/tuberculosis). Diagnosis of TB in the lungs may also be made using an X-ray or sputum test and in cases of extra-pulmonary Tuberculosis (where the disease is affecting organs other than the lungs), fluid or tissue samples may be tested (http://www.avert.org/tuberculosis.htm). There other scientifically proven ways of diagnosing TB.

Formatted: Font: 12 pt, Font color: Auto

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

This study attempted to establish how traditional healers diagnose TB in people that seek their services since. Nnearly seven7 in every ten10 of the respondents (69 percent) claimed that they diagnose TB. It was therefore important to establish how

the healers determine that someone has got TB. Respondents were therefore asked, in an open ended question how they diagnose ~~etermine that someone has got~~ TB infection.

A large number of the respondents who were spiritualists/spiritual faith healers reported that they are guided by 'spirits'. These are either 'holy spirits' (*mizimu*) or 'demonic spirits' (*ingulu or mashabe*). According to these respondents, during diagnosis (*chipimo*) they seek guidance from the 'spirits' who reveal to them what a particular patient's problem is. The following were typical responses:

> [7] *"We use traditional x-ray through the guidance of Spirits"~~.~~ (Female healer: Lusaka).*
>
> [8] *"One of my patients had a swollen abdomen and the spirits advised that the patient goes to the hospital as it was TB" (Male healer: Chipata)*

A number of healers (mostly herbalists) however reported that they simply rely on signs and symptoms to ~~identify that someone has got~~diagnose TB ~~prior to commencing of treatment~~:

> [9] *"We just look at someone and will know that he has TB" (Male healer: Lusaka)*
>
> [10] *"We just rely on what the patient describes but in hospitals they take sputum" (Female healer: Lusaka).*

3.3.2 Treatment of TB

The success rate of TB treatment among modern health practitioners in African countries is reasonably high and has been increasing over time. According to the African Union (AU), the treatment success rate has been increasing progressively

from since 1999. The success rate has increased from 59 percent in 199 percent in 2005. Nevertheless, it is still argued that at 76 percent, the TB tr success rate for Africa still falls short of the targeted rate of 85 percent (AU, 2008).

Respondents in this study were asked to indicate the number of TB cases they had handled, how many they had successfully treated, duration of treatment, and the number that failed to respond to their treatment and the reasons for failure during the month and year preceding the study in the year preceding the study and the reasons for failure. Some of the responses to these questions are presented in Table 12.

Table 12: *Number of suspected TB cases treated by traditional healers, number successfully treated, number unsuccessfully treated and duration of treatment*

	Month prior to date of interview	**Previous year(2009)**
Total number of suspected TB cases successfully treated	129	532
Residence		
Lusaka	107	463
Chipata	22	69
Mean	**9**	**23**
Total number of suspected TB cases unsuccessfully treated	10	26
Mean	**10**	**6.5**
Duration of treatment	**Number**	**Perce**
Less than one month	23	39
One month	17	28.8
Two months	12	20.3

Three months		7	11.9
Total		**59**	**100**

Traditional healers in this study claimed to have attended to a total of 129 TB patients averaging 9 cases per individual, in the month preceding the study and 532 TB cases during the year preceding the study. Those claimed by traditional healers from Lusaka represent 83.9 percent and 87 percent for the month and year preceding the study respectively. Out of the 129 cases of TB that the respondents claimed to have attended to, only 10~~9~~ (~~6.7~~7.8 percent) were reported to have failed to respond to treatment and the rest (about 93 percent) were reported to have successfully been treated. During the year preceding the study, the claimed success rate was about 95.1 per-cent. These percentages are far much higher than those reported for all of Africa in medical treatment of TB and are much higher than the targeted rate of 85 per-cent (AU, 2008, op cit).~~.~~

While most respondents in this study claimed to have successfully treated suspected TB cases, they equally admitted failures in some cases and various reasons were cited for this. One of the reasons cited was delay by patients in seeking treatment.

> [11]*"For any disease, people need to seek treatment early...if they delay, even at ~~the~~modern hospitals treatment may not respond...so even with our medicine, when ~~they~~people delay to seek treatment, treatment may fail but we can't say that the medicine does not work" (Male healer, Lusaka).*

Co-infection with HIV/AIDS was another factor that some traditional healers cited for TB treatment failure:

> [12]*"The only person I treated for TB who did not get well also had ~~our~~the current disease (HIV/AIDS)" (Female healer, Chipata).*

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Interestingly, some traditional healers in the study blamed witchcraft for TB treatment failure suggesting that TB cannot be cured if witchcraft is the cause and the patient delays to seek treatment.

> [13]*"Usually those who fail to respond to TB treatment when they come to me is because of lilomba (snake like witchcraft charm)...lilomba is the culprit, it coils and licks one's body and they start losing weight and in hospitals they say it is TB...people usually come with x-rays from the hospital but we tell them to throw them away because we know it is lilomba...but when the lilomba coils you up to the neck you can't get cured" (Female healer, Lusaka).*

Others attributed TB treatment failure to the patients' inability to adhere to treatment. Non-compliance to tuberculosis treatment has also been ~~cited~~ acknowledged in modern medical literature as a major obstacle in successful treatment of TB and has been identified ~~to contribute~~to contribute largely to the rise in incidence and prevalence because it is one of the principal causes of treatment failure (Mweemba et al, 2008).

3.3.3 Duration of TB treatment

To successfully treat TB ~~in modern health institutions,~~with conventional medicine, patients need to take drugs for several months. On average, TB treatment takes about six to eight months of daily treatment (http://www.avert.org/tuberculosis.h

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

contrast, traditional healers in this study claimed that their treatment duration for TB

was shorter **(Table 12)**. The claimed treatment duration ranged from less th month (29 percent) to as long as only three months (11.9 percent).

3.3.4 Ingredients in Traditional TB medicine ~~**While it takes several mo complete TB treatment at modern hospitals, the claimed duration treatment among traditional healers was found to be far much shorter. A larger proportion (39percent) of respondents reported that their treatment takes less than one month to complete and for a patient to be fully recovered. For example 28.8 percent of the respondents claimed that treatment takes one month, 20.3 percent claimed that treatment takes two months while 11.9 percent claimed that treatment takes three months (Table 12).**~~

The major ingredients mentioned in the medicines used for TB treatment wer ~~to TB patients were~~ herbs and/or roots for cough relief, cleaning the chest (re sputum), and energy boosting. These roots/herbs are prepared into powder fo taken with porridge for three to five times a day. However, none of the traditional healers in the study volunteered to disclose the nature and types of these herbs

~~According to respondents in the study, these roots/herbs are prepared into form and taken with porridge for three to five times a day.~~

3.3.5~~3~~ Perceptions of the effectiveness of traditional medicine in TB tre compared to modern medicine

Formatted: Font: 12 pt, Bold, Font color: Auto
Formatted: Font: 12 pt, Font color: Auto, Not Highlight
Formatted: Font: 12 pt, Font color: Auto, Not Highlight
Formatted: Font: 12 pt, Bold, Font color: Auto, Not Highlight
Formatted: Font: 12 pt, Bold, Font color: Auto
Formatted: Font: Bold
Formatted: Font: 12 pt, Font color: Auto, Not Highlight
Formatted: Font: 12 pt, Font color: Auto, Not Highlight
Formatted: Font: 12 pt, Font color: Auto, Not Highlight
Formatted: Font: 12 pt, Font color: Auto, Not Highlight
Formatted: Not Highlight
Formatted: Font: 12 pt, Font color: Auto
Formatted: Line spacing: Double

When asked to compare the effectiveness of traditional medicine to modern medicine in TB treatment, respondents gave mixed reactions. ~~Majority~~ A number of the respondents were of the view that traditional medicine is better and more effective in the treatment of TB than modern medicine and various reasons were given as indicated in the following illustrative excerpts~~because of short treatment duration, has no side effects and, is pure. The following excerpts illustrate these views~~:

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

> [14]*"Traditional medicine is better… with modern medicine, it has side effects which weaken the body but traditional medicine does not have side effects" (Male healer, Lusaka).*

> [15]*"Our medicine is more powerful because it is pure...the people at the modern hospitals add chemicals which weaken the medicine" (male healer, Lusaka).*

> [16]*"Medical doctors use trees to make medicine...this is destroyed by processing...in pure form like traditional medicine, treatment could be one injection" (male healer, Lusaka).*

However, a few respondents were of the view that modern medicine is better and more effective.

> [17]*"Modern medicine is better because our medicine delay for someone to respond" (male healer, Chipata).*

> [18]*"Modern medicine is better because modern doctors have been to school...we do not have Labs" (male healer, Lusaka).*

Others were of the view that modern medicine and traditional medicine were the same with regard to effectiveness in TB treatment.

> [19]*"They are both effective as long as one does not delay treatment" (Female healer, Chipata)*

This clearly shows that traditional healers know and appreciate the need for prompt treatment.

3.4 Collaboration with conventional~~modern~~ health institutions, Knowledge of and willingness towards involvement in the DOTS program

Collaboration between traditional healers and modern medical practitioners cannot be overemphasized given the already stated fact that, in most parts of Africa, traditional healers are the first to be contacted in case of ill health. Due to this fact, it is important for the two groups of health providers to partner in health for effective disease management.

In ~~modern~~ conventional medical treatment of TB, the directly observed therapy (DOTS) program has been developed. The DOTS is the name given to the World Health Organization recommended TB control strategy. This is an important strategy in curbing morbidity and mortality ~~due to~~associated with TB. It has five components that include (a) supervised medication taking, (b) drug availability including reserve drugs, (c) sputum testing facilities with quality control, (d) patient tracking and (e) political commitment at governmental level (NCCC, 1999:79).~~:~~

Formatted: Font: 12 pt, Font color: Auto, Not Highlight

Traditional healers present a potential resource in achieving component (a) supervised medication taking) and (b) patient tracking because of their omnipresence in communities and the popularity and respect they enjoy in these communities. For this reason, it was deemed imperative to investigate the extent to which traditional

healers are aware of and participate in the DOTS programme and challenges faced in this collaboration. The success of the DOTS strategy is dependent on how well different partners, including traditional healers, collaborate ~~and~~ with each other.

3.4.1 Collaboration with conventional~~modern~~ health institutions

Table 13 shows the distribution of respondents who indicated that they collaborate with modern health institutions and those willing to collaborate.

Table 13: *Number and percent distribution of respondents who collaborate with conventional health institutions and those who were willing to collaborate by residence.*

	Collaborate with conventional health institutions	**Willing to collaborate with Conventional health Institutions**
Residence		
Lusaka	42 (70.0)	58 (96.7)
Chipata	32 (80.0)	38 (95.0)
Total	**74 (74.0)**	**96 (96.0)**

A large proportion of respondents (74 percent) claimed that they collaborate with modern health institutions and~~. Figure 2 further shows that~~ a larger proportion (96 percent) expressed willingness to collaborate with these institutions. There were differences observed in terms of residence with 80 percent of the respondents from Chipata claiming that they collaborate with conventional health institutions compared to 70 percent from Lusaka. The difference in terms of willingness to collaborate was only 1.7 percent.

Current areas of collaboration, which are presented in Table 14, include referral of patients from traditional healers to modern health institutions (94.6 percent). The following verbatim illustrates the collaboration that exists between traditional healers and modern health institutions:

> *"One of my patients had TB symptoms but he was difficult and w refusing to go to the clinic with his parents. However he had confidence in me as such I am the one who took him to the clinic where he was put on treatment. I continued visiting him and assisting him to take his drugs at 08:00 hrs after giving him food" (Female healer, Lusaka).*

Formatted: Indent: Left: -0.25", Right: -0.61", Line spacing: single

However, referrals in the opposite direction (from modern health institutions to traditional healers) are minimal (21.6 percent) just like joint training programmes and joint visits (36.5 percent and 1.4 percent respectively).

~~*"One of my patients had TB symptoms but he was difficult and was refusing to go to the clinic with his parents. However he had confidence in me as such I am the one who took him to the clinic where he was put on treatment. I continued visiting him and assisting him to take his drugs at 08:00 hrs after giving him food" (Female healer, Lusaka).*~~

Formatted: Font: Italic

Formatted: Normal, Indent: Left: 0"

Formatted Table

Formatted: Left, Indent: Left: 0", Right: -0.04"

Table 14: *Number and percent distribution of respondents by ways of how t Collaborate with conventional~~modern~~ health institutions.*

Formatted Table

	Number N=74	
Traditional healer makes referrals to hospital/health centre/clinic	70	94.6
Have joint training programs	27	36.5
Hospital/health centre/clinic makes referrals to traditional healer	16	21.6
Have joint visits	1	1.4

Note: Because multiple responses were given, the sum of responses may be >100

~~However, referrals in the opposite direction (from modern health institutions to traditional healers) are minimal (36.5percent) just like joint training programmes and joint visits.~~

The predominantly one-sided referral system could be attributed to a number of challenges which traditional healers cited as main obstacles to effective collaboration between themselves and modern medical institutions. The main challenges cited included mistrust and disrespect by modern health practioners and by government at large. The following, though not exhaustive are illustrative of such sentiments by traditional healers:

> [21] *"These nurses get annoyed when they find tattoos on patients. (Male healer, Lusaka).*
>
> [22] *"They do not pay attention to referral letters...sometimes our referral letters are torn" (Male healer, Lusaka).*
>
> [23] *"Balatusula tatubombela cha pamo.... (They belittle us and so we don't work together)" (Female healer, Lusaka).*
>
> [24] *"The government does not respect traditional healers...much attention is given to modern medical practitioners than traditional healers" (Female healer, Lusaka).*

3.4.2 Knowledge of and willingness towards involvement in the ~~DOTS (t~~Treatment ~~s~~Support~~)~~ ~~p~~Program (DOTS)

People with TB can be given treatment where they take their medication without supervision, or where medication is taken with supervision (swallowing of medication is observed). The latter is known as directly observed therapy and observations can be made by a medical health practitioner or other person such as a relative or any other close person (NCCC, 1999).

Traditional healers can also been utilized in supervising TB medication taking if they are aware of the programme and are willing to do so.

~~It is also possible that traditional healers could be used to obse~~ **Formatted:** Indent: Left: 0"

~~taking of TB drugs in the community if they are aware of the program and are willing to participate.~~

Table 14 shows the distribution of respondents who claimed to be aware of the DOTS program and those who expressed willingness to participate as supervisors in the DOTS. More than half (57 percent) of the respondents indicated that they were aware of the DOTS program and the majority (84 percent) indicated willingness to participate in the program as treatment supervisors.

The proportions of traditional healers expressing willingness to be TB treatment supervisors ranged from 25 percent among the oldest age group to 100 percent among those in the age groups 35-44 and 75-78. None of the respondents reported to be officially participating in the DOTS program as a treatment supervisor.

Table 15: *Number and percent distribution of respondents who were aware of the DOTS (treatment support program) and those who were willing to be treatment supervisors by selected background characteristics*

Background Characteristics	Aware of DOTS(treatment support program)	Willing to be treatment supervisor
Age		
25-34	02 (66.7)	02 (66.7)
35-44	15 (83.3)	18 (100.0)
45-54	26 (68.4)	34 (89.5)
55-64	05 (20.8)	21 (87.5)
65-74	06 (66.7)	04 (44.4)
75-84	03 (75.0)	04 (100.0)
85+	00 (0.0)	01 (25.0)
Sex		
Male	23 (60.5)	29 (76.3)
Female	34 (54.8)	55 (88.7)
Residence		
Lusaka	34 (56.7)	49 (81.7)
Chipata	23 (57.5)	35 (87.5)
Type of Healer		
Herbalists	08 (36.4)	17 (77
Spiritualists/spiritual faith healers	49 (62.8)	67 (85.9)
Years of Experience		
1-9	05 (71.4)	06 (85.7)
10-19	18 (66.7)	26 (96.3)
20-29	20 (64.5)	29 (93.5)
30-39	06 (35.3)	15 (88.2)
40-49	06 (54.5)	07 (63.6)
50-59	02 (66.7)	00 (0.0)
60-69	00 (0.0)	01 (100)
70+	00 (0.0)	00 (0.0)
Total	**57 (57.0)**	**84 (84.0)**

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: Italic

~~The proportions of traditional healers expressing willingness to be TB treatment supervisors ranged from 25 per cent among the oldest age group to 100 per cent among those in the age groups 35-44 and 75-78.~~

~~Willingness to be treatment supervisor was highest among respondents who were in the age groups 35-44 (100 percent), 45-54 (89.5 percent) and 55-64 (87.5 percent).~~ In terms of gender, more men (60.5 percent) than women (54.8 percent) indicated that they were aware of the treatment support program. However, in terms of willingness, more women (88.6 percent) than men (73.3 percent) indicated willingness to be treatment supervisors.

~~By residence, there was not much difference on the awareness of the treatment support program.~~ Willingness to be treatment supervisors was high in both towns (over 80 percent). However, relatively more (87.5 percent) respondents from Chipata indicated willingness to be treatment supervisors compared to 81.5 percent from Lusaka. Awareness of the treatment support program and willingness to be treatment supervisor was highest among Spiritualists/spiritual faith healers (62.8 percent and 85.9 percent respectively). Willingness to be treatment supervisors was also highest among respondents who reported to have been practicing for years between 1 and 39. It can also be observed that among the respondents who indicated that they had attended training workshops on TB, 74.1 percent indicated awareness of the treatment support program and 88.9 percent indicated willingness to be treatment supervisors.

Chapter 4

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

4.1 Discussion

The general objective of the study was to explore the role of traditional healers in the management of TB in Zambia. Specifically the study examined, among others, knowledge levels of tuberculosis among traditional healers on the forms of TB, its mode of infection and prevention, suspected TB cases that traditional healers attend to, management practices of tuberculosis among traditional healers and knowledge of and willingness to participate~~towards their involvement~~ in the DOTs program.

Formatted: Font: 12 pt, Font color: Auto

In the management of TB, 69 percent of the traditional healers claimed that they were able to diagnose and treat TB. To this effect, traditional healers claimed to have successfully treated a total of 532 and 129 suspected TB cases in the month and year,

respectively, prior to the interview. Out of the 129 claimed TB cases attended to in the month prior to the interview, only 10 were reported to have been unsuccessful or failed to respond to treatment suggesting a very high (93 percent) rate of success in TB treatment among traditional healers. In the year preceding the study, the claimed success rate in TB treatment was equally high (95 percent).

It is important to mention however that, notwithstanding the claimed success in TB treatment, a large proportion (35 percent) of the traditional healers were not able to identify the most common symptom of TB let alone other symptoms. This casts doubt on the validity of the traditional healers' claimed ability to successfully treat TB.

Most studies on knowledge of TB among the general population have revealed low knowledge levels. For example, in the study by Koay (2004) in Kudat, Malaysia, only 46.2 percent of the respondents identified coughing up blood as a symptom of TB. This finding is similar to what was established in this current study. Analysis of responses to questions on knowledge of symptoms and diagnosis of TB shows that while some (65 percent) of the respondents could correctly identify a cough that lasts for more than three weeks as the main symptom of TB, only between 17 percent and 23 percent could correctly identify other symptoms associated with TB that include coughing up blood (23 percent), appetite and weight loss (31 percent) and night sweats (17 percent). On TB diagnosis, most traditional healers mentioned methods

such as consulting spirits that are almost impossible to verify as they are not amenable to modern methods of scientific investigation.

~~Out of the 532 TB cases that traditional healers claimed to have treated, only 26 were reported to have failed to respond to treatment. This represents a success rate of approximately 95 percent.~~

~~Analysis of responses to questions on knowledge of symptoms and diagnosis of TB casts some doubt on the validity of traditional healers' claimed ability to successfully treat TB. While some (65percent) of the respondents, especially among those with secondary education level of education and those who had attended workshops, could correctly identify a cough that lasts for more than three weeks as the main symptom of TB, only between 17 percent and 23 percent could correctly identify other symptoms associated with TB that include coughing up blood (23percent), appetite and weight loss (31percent) and night sweats (17percent). On TB diagnosis, most traditional healers mentioned methods such as consulting spirits that are almost impossible to verify as they are not amenable to modern methods of scientific investigation.~~

Information collected on traditional healers' knowledge of modes of TB transmission and ways of prevention revealed a lot of misconceptions and myths that have the potential to lead to delays in seeking professional medical care by the victims and may also lead to improper handling of TB by traditional healers. Of those who responded to the question on modes of TB transmission, only 49 per-cent were able

to correctly identify breathing air contaminated with the TB germ as the main mode of transmission. This is significantly low when compared to the findings in the study conducted by Peltzer *et al* (2006) in South Africa where 81 percent of the traditional healers knew the transmission route for TB. Other responses represented myths such as the belief that TB can be transmitted by having sex with a woman who has aborted (21 percent), or one who is either having her menstrual cycle (8 percent) or one who has TB (13 percent). Another misconception was that TB can be acquired by sharing eating utensils with someone who has TB (31 percent). The latter finding is consistent with findings of studies conducted among other populations other than traditional healers outside Zambia. For example, in Thailand, a study among health workers and the general population, including health staff, revealed widespread belief that sharing spoons or cups with TB patients were strongly associated with the risk of getting TB and, accordingly, the common preventive behaviour of TB included separating eating utensils and avoiding eating with others(Ngamvithayapong *et al* 2000). Such beliefs, if not countered or corrected, can easily lead to stigma and discrimination against people infected with TB which may lead to concealment of the disease and/or delay in seeking expert help. Other misconceptions and beliefs such as that TB can be inherited or transmitted sexually were also observed in Cambodia (http: // www. soph. uab. edu/ gorgas/ Documents/ traditional healers) and KwaZulu Natal (Peltzer *et al*, 2006).

~~These m~~Misconceptions on TB transmission, which are a reflection of inadequate knowledge about how TB is transmitted, were mirrored in misconceptions about how

TB can be prevented. Not only was knowledge about TB prevention low as evidenced by only 29 percent of the respondents who correctly indicated that TB can be prevented by adequately ventilating the house where a TB patient resides, but a large number of traditional healers had misconceptions that included the belief that avoiding sex with a TB patient, or someone having her menstrual cycle as well as use of condoms, and not sharing eating and other utensils can prevent TB transmission.

An encouraging finding in the management of TB and collaboration with modern health institutions, however, is that a large proportion (74 percent) of traditional healers claimed collaboration with the modern health sector by referring suspected TB patients to modern health ~~sector~~ facilities. However, reciprocal referrals were reportedly minimal, and traditional healers in the study complained of hostility, disrespect and mistrust as major hurdles to effective collaboration. This, notwithstanding, it is encouraging to note that more than 8 out of 10 (84 percent) of respondents indicated willingness to be treatment supervisors for TB patients on medical treatment. ~~the majority (84percent) of the respondents indicated they were willing to participate in the (DOTS) program as treatment supervisors.~~ This is encouraging given the fact that previous studies in other countries have demonstrated that traditional healers can be quite effective as DOTS treatment supervisors. For example, in Hlabisa, KwaZulu-Natal South Africa, a study that was conducted to assess the acceptability and effectiveness of traditional healers between 1999 and 2000 (Colvin et al) showed that ~~that~~ overall, 89 percent of TB patients who were ~~of~~

those supervised by traditional healers (n=53) completed treatment, compared with 67 percent of those supervised by others (clinics and community Health Workers (n=364). Furthermore, the mortality rate among those supervised by traditional healers was 6 percent, whereas it was 18 percent foramong those supervised by others. This study showedsuggests that traditional healers are accepted, effective and convenient as DOTs supervisors (Colvin *et al*, 2003) and it clearly shows that currently in Zambia; traditional healers are an unexploited resource in TB management through the DOTs program.

As regards contribution to theory, the study has shown that the theory of reasoned action/theory of planned behaviour is relevant in understanding the behaviour of traditional healers in disease management. The study has shown that to a large extent, traditional healers are rational and make systematic use of the information available to them by referring suspected TB cases to modern health institutions (74 percent) which is in conformity with what the theory suggests. Furthermore, the fact that some traditional healers still treat TB in spite of the information being disseminated, shows that their behaviour is not only determined by information dissemination but there is also the aspect of non-volitional control which may include the influence of the supernatural.

4.2 Conclusion

The study has described the knowledge levels of TB among traditional healers and has investigated the role that traditional healers are currently playing in the management of TB among traditional healers. Interesting issues have been highlighted which include low knowledge levels of TB among traditional healers and the fact that traditional healers are treating TB in spite of the low knowledge levels.

Noting the fact that traditional healers play a critical role in disease management and that most people in Zambia and Africa are most likely to seek help from traditional healers, findings of this study have highlighted, through the recommendations, how the potential role of traditional healers in the management of TB can be actualised by ~~Their participation can however be enhanced by fully and~~ officially integrating them into the TB management program. This is feasible given the fact that most traditional healers expressed willingness to collaborate with the modern health sector as treatment supervisors in the management of TB and also that traditional healers are omnipresent, trusted and respected in most Zambian communities. ~~. This is especially so considering the revelation that most traditional healers are willing to collaborate with modern health practitioners in the management of TB and are also willing to work as treatment supervisors.~~ However, ~~Most important,~~ to fully integrate traditional healers into the TB management program there is need not only to increase their knowledge and understanding of TB but also to address the mistrust and disrespect that traditional healers alleged is perpetuated by ~~that which is needed also is to address the challenges that may affect and do affect the full participation of healers in the program. These are firstly low knowledge levels of TB signs and~~

~~symptoms, modes of transmission and prevention and secondly the mistrust and disrespect by~~ not only modern health practitioners but ~~and~~ by government as well. ~~that was alleged to exist by traditional healers.~~

Comment [ak1]: Take these to the methodology section

4.3 Recommendations

Formatted: Font: 12 pt

Based on the findings of the study, the following are recommended;

Formatted: Font: 12 pt

1. There is need for more and regular workshops on TB targeted at tra Formatted: Font: 12 pt healers aimed at, not only raising awareness about the symptoms of TB, but also the need for traditional healers to refer patients who present with symptoms suggestive of TB infection for a TB test. These workshops can also be used to address and dispel myths and misconceptions that currently surround TB causation, ~~and~~ transmission and prevention.

2. There is need to seriously explore the potential health benefits of traditional medicine by subjecting it to scientific investigation. This can be done through initiating and/or sustaining formal dialogue/discussions between the Ministry of Health and the Traditional Healers Association at both local and national levels. This is necessary not only in fostering a closer working relationship and a better understanding between the two health~~,~~ systems, but will also offer an opportunity to validate or dispel claims that traditional medicine is effective in the treatment of TB.

3. There is need to find ways and mechanisms of incorporating traditional healers as medication supervisors in the DOTS (treatment support program) because experience from other countries and the willingness expressed by most traditional healers interviewed for this study, clearly indicates that they can be relied upon to effectively and successfully implement the program.

4. There is need to incentivise traditional healers who successfully supervise a patient on TB treatment. The incentive can be in form of an allowance agreed upon between the Ministry of Health and Traditional health Practitioners Association. This will not only motivate them but has the potential to increase the number of traditional healers willing to be treatment supervisors.

5. There is need to find ways of addressing distrust and hostility that seems to hinder effective collaboration and cooperation between traditional healers and conventional health care providers. While in the short term, this can be achieved through joint workshops, in the long term this may require considering integrating issues of traditional medicine in medical school curriculum.

6. There is need to investigate, among community members, especially former TB patients, their confidence in, and level of satisfaction with traditional healers in the treatment of TB as another~~one~~ way of determining the validity of the claimed efficacy of traditional medicine in TB treatment.

REFERENCES

Ayaya S.A, Sitienei J, Odero W, and Rotich J. "***Knowledge, attitudes, and practices of private medical practitioners on tuberculosis among hiv/aids patients in Eldoret Kenya***". East African Medical Journal Vol. 80 No. 2 February 2003.

Berthollet B.K; Torkel F; Ndubani P; Bengt H; Vongo R; Ruairi B; Faxelid E. ***Can biomedical and traditional health care providers work together? Zambian practitioners' experiences and attitudes towards collaboration in relation to STIs and HIV/AIDS care: a cross-sectional study***. BioMed Central Ltd. *Human Resources for Health* 2006, 4:16doi:10.1186/1478-4491-4-16

Busari Olesegun, Adedavo Adeyemi, Olusogo Busari. ***TB knowledge and management practices among Nigerian medical interns***. Internet Journal of Infectious Diseases, 2008

Bonnet M, Pinoges L, Varaine F, Oberhauser B, O'Brien D, Kebede Y, Hewison C, Zachariah R, and Ferradini L. ***Tuberculosis after HAART initiation in HIV-positive patients from five countries with a high tuberculosis burden.***AIDS (2006). 20(9):1275-9.

Central Board of Health (2003). Training of traditional healers facilitators guide: Revised version-2003. Central Board of Health, Lusaka.

Cichocki M (2007). ***Tuberculosis Guide - A Guide to TB and the TB Test Understanding TB, the TB Test and how they Relates to HIV .http://aid com***

Chipfakacha V.G. "***STD/HIV/AIDS knowledge, beliefs and practices of traditional healers in Botswana"***. AIDS Care. 1997 Aug;9(4):417-25.

Colvin M, Gumede L, Grimwade K, and Wilkinson D. ***Integrating tra healers into a tuberculosis control programme in Hlabisa, South Africa***. MRC policy brief, ~~No 4~~ December 2001; 9.

Lisa Crammer (2008). ***Pediatric TB/HIV: A situational analysis in Addis Ethiopia.*** Frameworks in Global Health Fellowships Final report.

Formatted: Font: 12 pt

Formatted: Font: 12 pt

Formatted: Font: 12 pt

Formatted: Font: 12 pt, Not Highlight

Formatted: Font: 12 pt

Formatted: Font: 12 pt

Formatted: Font: 12 pt, Not Bold, Not Italic

EQUI-TB. ~~(2003).~~ ***Quality Assured TB Care for Poor People in R*** ***Constrained Settings Partners' Meeting Report***. School of Public Health, Fudan University, Shanghai. (2003) Nov 13-17.

FIND. ***Strategic approach and priorities setting for the TB public health sector.*** Presentation by Dr Giorgio Roscigno.

Hashim D.S; Al Kubaisy V; Al Dulayme W. ***Knowledge, attitudes and practices survey among health care workers and tuberculosis patients in Iraq***. Health Journal.2003,July9(4).

Hoa N.P, Chuc. N.T.K, Thorson A. ***Knowledge, attitudes, and practices*** ***tuberculosis and choice of communication channels in a rural community in Vietnam***. Health Policy April; ~~90 (~~2009~~)~~: ~~90:~~ 8-12

Hong Y P, D. W. Kwon, S. J. Kim, S. C. Chang, M. K. Kang, E. P. Lee, H. D. Moon and W. J. Lew. ***Survey of knowledge, attitudes and practices for tuberculosis among general practitioners***. Korean Institute of Tuberculosis, Korean National Tuberculosis Association, Seoul, Korea

http://www.avert.org/tuberculosis.htm

http://www.**soph.uab.edu/**gorgas/Documents/TRADITIONALHEALERSpercent20

Koay T.K.***Knowledge and Attitudes Towards Tuberculosis Among the People Living in Kudat District, Sabah***. Medical Journal of Malaysia, 59 (4) (2004): 502-511.

Kofi-Tsekpo. ***Institutionalization of African traditional medicine in health care systems in Africa***. Kenya Medical Research Institute. African Journal of Health Sciences. 2004;11(1-2):i-ii.

Manalo M.F, Pineda A.V and Montoya J.C. ***Knowledge, Attitudes and Practices for Tuberculosis among Filipino Family Physicians: A Comparative Analysis by Practice Setting and Location***. Phil J Microbiol Infect Dis 1998; 27(1):6-12.

Formatted: Font:
Formatted: Not Highlight
Formatted
Formatted: Font: 12 pt
Formatted: Font: 12 pt, Not Highlight
Formatted: Font: 12 pt

Mangesho P.E, Shayo E, Makunde W.H, Keto G.B, Mandara C.I, Kamugisha Kilale A.M, Ishengoma D.R. ***Community knowledge, attitudes and practices towards tuberculosis and its treatment in Mpwapwa District, central Tanzania***. Tanzania Health Research Bulletin (2007); Vol. 9, No.9 (1).

Marzieh Nojoomi, Ladan Mokhberal-Safa, Akhtar Jamali. ***Study of Knowled Attitude of Private General Physicians of Karaj City Regarding Natio Programs – 2002***. National Research Institute of Tuberculosis and Lung I Iran. Tanaffos (2003) 2(6), 67-73

Montaño, D. E.; Kasprzyk, D., (2008), **The theory of reasoned action, the theory of planned behavior, and the Integrated Behavioral Model**, *Health Behavior and Health Education: Theory, Research and Practice*, Glanz; Viswanath; Rimer, Jossey-Bass Publishers, Inc., San Francisco, CA.

Muhammad N.R, Tahir R, Muhammad S.I, Khalil A. ***Knowledge and practices of the medical practitioners about management of childhood tuberculosis***. Gujrat City Pak Paed J Jun 2006;30(2):101-4.

Mweemba P, Haruzivishe C, Siziya S, Chipimo P J, Cristenson K and Johansson E. ***Knowledge, attitude and compliance with tuberculosis treatment, Lusaka, Zambia***. Associated Reviews Ltd. Medical Journal of Zambia 2008 35(4): 121-128

MSF (2009) ***Tuberculosis: New Faces of an Old Disease***. Campaign for Access to Essential Medicine Médecins Sans Frontières.http://www.msfaccess.org

National Collaborating Centre for Chronic Conditions (NCCCC). ***Tuberculosis: clinical diagnosis and management of tuberculosis, and measures for its prevention and control***. London: Royal College of Physicians, 2006.

Ngamvithayapong Jintana, Winkvist Anna and Diwan Vinod (2000) ***High AIDS awareness may cause tuberculosis patient delay: results from an HIV epidemic area, Thailand.*** AIDS 2000, 14:1413-1419

Peltzer K, Mngqundaniso N and Petros G. ***HIV/AIDS/STI/TB knowledge, beliefs and practices of traditional healers in KwaZulu-Natal, South Africa***. AIDS Care, August 2006; 18(6): 608_613.

Formatted: Font: 12 pt

Formatted: Font: 12 pt, Not Highlight

Formatted: Font: 12 pt

Formatted: Font: 12 pt, Not Highlight

Formatted: Font: 12 pt

Formatted: Font: 12 pt, Not Highlight

Formatted: Font: 12 pt

Phongsamart W, Kitai I, Gardam M, Wang J and Khan K. ***A Population Study of Tuberculosis in Children and Adolescents in Ontario***. The Pediatric Infectious Disease Journal: May 2009 Volume: 28 Issue (5) : 416-419.

Population Reference Bureau and United States Agency for International Development (2010). ***2010 World Population Data Sheet.*** www.prb.org.

Puckree T; Mkhize M; Mgobhozi Z; Lin J**.** ***African traditional healers: what health care professionals need to know.*** International Journal of Réhabilitation Research. December 2002; 25(4):247-51.

Sharma S.K. and Mohan A. ***Extra pulmonary tuberculosis***. Review Article Indian J Med Res 120, October 2004: 316-353.

Stekelenburg J, Jager B.E, Kolk P.R, Westen E.H.M.N, van der Kwaak A, Wolffers and I.N. ***Health seeking behaviour and utilisation of traditional healers in Kalabo, Zambia.*** *Health Policy* 2005, 71**:**67-81. PubMed Abstract

UNAIDS (2002). ***ANCIENT REMEDIES, NEW DISEASE: Involving traditional healers in increasing access to AIDS care and prevention in East Africa***. UNAIDS/02.16E (Original version, June 2002)

Vijayaraman A, Chadha V.K, Shashidhara A.N, Jaigopal M.V, Selvam M. ***A study of knowledge, attitude and practice of medical practitioners regarding tuberculosis and its control in a backward area of south India***. The Indian Journal of Tuberculosis. 1998 July; 45(3): 173

USAID (2007) http://www.usaid.gov/global_health/tuberculosis

WHO (2006). ***Guidance for national tuberculosis programmes on the management of tuberculosis in children***. World Health Organization.

WHO (2004). ***TB/HIV Control Strategy for the African Region***. World Health Organization Office for the African Region Harare, Zimbabwe October 2004.

Formatted: Font: 12 pt

Formatted: Font: 12 pt, Not Highlight

Formatted: Font: 12 pt

Formatted: Font: 12 pt, Not Highlight

Formatted: Font: 12 pt

Formatted: Font: 12 pt, Not Highlight

Formatted: Font: 12 pt

Formatted: Font: 12 pt

APPENDIX: *Questionnaire*

THE UNIVERSITY OF ZAMBIA
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES
DEPARTMENT OF SOCIAL DEVELOPMENT STUDIES
DEMOGRAPHY DIVISION

THE ROLE OF TRADITIONAL HEALERS IN THE MANAGEMENT OF TB IN ZAMBIA:

(AN EXPLORATORY STUDY AMONG TRADITIONAL HEALERS IN LUSAKA AND CHIPATA)

INTRODUCTION

I am a student from the University of Zambia. I am undertaking a study on the knowledge, attitudes and practices of traditional healers in the management of tuberculosis. I would like to discuss with you on the issue because the information from you is vital in improving the management of TB in the country. I promise that the information you will give me will be treated with the utmost confidentiality and will be used only for the Purpose of this research. May we go ahead with the interview?

SECTION 1:			
101	Date of Interview	___/___/2010	
102	District	1. Lusaka 2. Chipata	
103	Name of Community	……	
104	Location of community	1. Urban 2. Rural	

SECTION 2: BACKGROUND CHARACTERISTICS OF THE RESPONDENT			
Que #	**Question**	**Category and Code**	**Skip**
201	How old were you on your last birthday?	[ ][ ]	
202	Sex of respondent	1. Male 2. Female	
203	What is your	1. Single	

	marital status?	2. Married 3. Widowed 4. Divorced 5. Separated	
204	What is your highest level of educational attainment?	1. Primary 2. Secondary 3. Tertiary 4. No education	
205	Which country are you originally from?	1. Zambia 2. Malawi 3. Congo 4. Mozambique 5. Tanzania 6. Others……..	
206	Type of healer?	1. Herbalist 2. Spiritualist/Spiritual faith healer 3. Other.....	
207	How did you become a traditional healer?	....	
208	For how long have you been practicing as a traditional healer?		
209	For how long have you been practicing as a traditional healer in this community?		
210	What types of diseases/conditions are you able to treat?	…….....	
211	How many patients usually come to you?	a. On a daily basis [ ][ ][ ] b. On a weekly basis [ ][ ][ ] c. On a monthly basis [ ][ ][ ] d. On a yearly basis [ ][ ][ ]	
212	For what type of diseases do they come to seek your help?	…….....	
213	Is traditional healing practice your only source of income?	1. Yes → 2. No →	**Q 301** **Q 214**
214	What are your other sources of income?	**Yes** **No** a. Trading [ ] [ ] b. Farming [ ] [ ] c. Fishing [ ] [ ] d. Artisan [ ] [ ]	

		e. Others [ ] [ ] Specify…….	
SECTION 3: SOURCES OF INFORMATION, KNOWLEDGE OF TB, AND ITS ASSOCIATION WITH HIV/AIDS			
301	Have you ever heard about TB?	1. Yes 2. No →	**End**
302	How is TB referred to (called) in the local language?	…….. …….. ……..	
303	Do you feel well informed on TB?	1. Yes 2. No	
304	What are the sources of information for the information you have on TB?	**Yes** **No** a. Newspaper/ Magazine [ ] [ ] b. Radio [ ] [ ] c. TV [ ] [ ] d. Billboards [ ] [ ] e. Brochures/ posters [ ] [ ] f. Teachers [ ] [ ] g. Others……[ ] [ ]	
305	Have you ever attended any training workshops on Tuberculosis	1. Yes 2. No →	**Q 313**
307	How many training workshops on TB have you attended?	1. One 2. Two 3. Three 4. More than three	
308	How long ago did you attend the last workshop?	1. Last week 2. Last month 3. Last year 4. Other……..	
309	Who organized the workshop?	…….. …….. ….	
310	How useful were/was the workshop(s)?	1. Very useful 2. Useful 3. Not useful	
311	What sort of information was discussed at the workshop you attended?	**YES** **NO** a. What TB is [ ] [ ] b. The association of TB with HIV/AIDS [ ] [ ] c. How TB can be prevented [ ] [ ] d. How TB can be transmitted [ ] [ ] e. How TB can	

		be cured [ ] [ ] f. Others [ ] [ ] ……	
312	What presentations of TB do you know?	…… …… ……	
313	What manifestation of TB (extra pulmonary) do you know?	**Yes** **No** a. lymph node TB [ ] [ ] b. abdominal TB [ ] [ ] c. neurological TB [ ] [ ] d. bone and joint TB [ ] [ ] e. female genital TB [ ] [ ] f. tuberculosis of the breast [ ] [ ] g. Others…… [ ] [ ]	
314	What are the signs and symptoms of TB (pulmonary)?	**Yes** **No** a. Rush [ ] [ ] b. Cough that lasts more than four weeks [ ] [ ] c. Coughing up blood [ ] [ ] d. Appetite and weight loss [ ] [ ] e. Night sweats [ ] [ ] f. Difficulty in breathing [ ] [ ] g. Fever [ ] [ ] h. Chest pains [ ] [ ] i. Ongoing fatigue [ ] [ ] j. Don't know [ ] [ ] k. Others (specify)……. [ ] [ ]	
315	How can a person get TB (pulmonary)?	**Yes** **No** a. Handshakes [ ] [ ] b. A person can be bewitched [ ] [ ] c. Breathing air contaminated with TB germ [ ] [ ] d. Sharing eating utensils with someone who has TB [ ] [ ] e. Eating meat contaminated with TB germ [ ] [ ] f. Drinking milk contaminated with TB germ [ ] [ ] g. Don't know [ ] [ ] h. Having sexual intercourse with someone who has aborted [ ] [ ] i. Having sexual intercourse with	

		TB patient [ ] [ ] j. Smoking cigarettes [ ] [ ] k. Other…… [ ] [ ]	
316	In your opinion, at what stage is TB (pulmonary) likely to be most contagious?	…… …… ……	
317	How can a person prevent getting TB (pulmonary)?	**Yes** **No** a. Avoid shaking hands [ ] [ ] b. Avoid sharing eating utensils with someone who has TB [ ] [ ] c. Using prevention charms [ ] [ ] d. Ventilating the house [ ] [ ] e. Avoid drinking milk that is not boiled [ ] [ ] f. Avoid having sexual intercourse with someone who has aborted [ ] [ ] g. Avoid having sexual intercourse with TB patient [ ] [ ] h. Others…… [ ] [ ]	
SECTION 4: MANAGEMENT PRACTICES AND ATTITUDES TOWARDS DOTS			
401	Have you ever been trained in TB management and care?	1. Yes 2. No →	**Q 403**
402	What were you trained in?	**Yes** **No** a. Diagnosis [ ] [ ] b. Nutritional care for TB patients [ ] [ ] c. Community care and support [ ] [ ] d. Counselling [ ] [ ] e. Others…… [ ] [ ]	
403	Do you ever diagnose TB in patients that visit you?	1. Yes 2. No →	**Q 406**
404	What form of TB is most common in people that seek your services?	…… …… …… ……	
405	How do you determine that	…… ……	

	someone is suffering from TB?	....	
406	Is TB curable?	1. Yes 2. No	
407	Do you treat suspected TB cases?	1. Yes 2. No →	**415**
408	Briefly describe your treatment.	....	
409	How long does your treatment take?	1. Less than one month 2. One month 3. Two months 4. Three months 5. Four months 6. Five months 7. Six months 8. Seven months 9. Eight months 10. Others……	
410	Other than medicine, what else do you give to your patients with TB?	....	
411	How many people have you successfully treated for TB?	a. In the last one month [ ][ ][ ] b. In the last one year [ ][ ][ ] c. In the last two years [ ][ ][ ]	
412	How many have failed to respond positively to treatment?	a. In the last one month [ ][ ][ ] b. In the last one year [ ][ ][ ] c. In the last two years [ ][ ][ ]	
413	Why did they fail to respond to treatment?	....	
414	Compared to modern medicine, how do you rate the effectiveness of your medicine in TB treatment?	....	
415	What advise do you give to people on TB treatment?	....	
416	Do you collaborate with Hospital/Health centre/clinic in any way?	1. Yes 2. No →	**Q 418**
417	In what ways do you collaborate with	**Yes** **No** a. Traditional healer makes [ ] [ ]	

	Hospital/Health centre/clinic?	referrals to Hospital/Health centre/ clinic b. Hospital/Health centre/clinic makes referrals to Traditional healer [ ] [ ] c. Have joint training programmes [ ] [ ] d. Have joint visits [ ] [ ] e. Have joint sensitization campaigns [ ] [ ] f. Supervision of treatment for TB patients taking modern TB medicine [ ] [ ] g. Commemoration of world TB days [ ] [ ] h. Tracing of defaulters [ ] [ ] i. Do not collaborate [ ] [ ] j. Others…… [ ] [ ]	
418	Why don't you collaborate with the hospital/health centre/clinic?	....	
419	Are you willing to collaborate with the hospital/health centre/ clinic in the management of TB?	1. Yes 2. No	
420	Are you aware of the DOTS (treatment support) program?	1. Yes 2. No	
421	Are you willing to be a treatment supervisor for TB patients on medical treatment?	1. Yes 2. No	
422	How do you rate your willingness to be a treatment supervisor for TB patients on medical treatment?	1. Very high 2. High 3. Moderate 4. Low 5. Very low	

END OF INTERVIEW, ***Thank you very much.***