REFERRAL PRACTICES AMONG TRADITIONAL BIRTH ATTENDANTS AND FACTORS INFLUENCING THEM IN GEITA DISTRICT

By

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A dissertation Submitted in partial Fulfillment of the Requirements for the Degree of Masters of Public Health of Muhimbili University of Health and Allied Sciences.

Muhimbili University of Health and Allied Sciences

October, 2010.

CERTIFICATION

The undersigned certify that he has read and hereby recommends for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled, ***"Referral practices among Traditional Birth Attendants and factors influencing them in Geita district"*** in partial fulfillment of the requirement for the degree of Masters of Public Health of the Muhimbili University of Health and Allied Sciences.

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ACKNOWLEDGEMENT

I would like to use this opportunity to give thanks to the Ministry Of Health and Social Welfare (MOHSW) for sponsoring me to pursue this course. I wish to thank the entire Academic staff of the School of Public Health and Social Sciences of Muhimbili University of Health and Allied Sciences; it was from them that I got knowledge to perform this work. I am also obliged to give my sincere appreciation to my supervisor Prof. A.D.Kiwara, for his commitment in guiding and advising in writing this dissertation. Special recognition to Mr. C.K. Makwaya for his assistance in data analysis.

Also I would like to express my sincere gratitude to Government leaders of Geita District at all levels starting with District Executive Director, CHMT, Ward Executive Officers and Village Executive Officers for allowing me to conduct this study in their areas.

DEDICATIONS

This work is dedicated to my mother, my beloved wife; Rehema and my children Florence and Frank plus all my siblings for supporting me during the time of schooling.

ABSTRACT

Maternal Mortality ratio is higher in developing countries especially in Sub Saharan Africa compared to developed countries. This higher ratio is due to pregnant women missing emergency obstetric care when needed. Majority of deliveries are being conducted outside health facilities by unskilled personnel such as traditional birth attendants (TBAs). Some of the TBAs don't refer complicated cases to the health facilities and others do refer inappropriately.

The referral practices among TBAs are being studied because there is limited and inconclusive information. The aim of this study was to establish the factors which influence referral practices of TBAs. The study also attempted to establish the level of knowledge of TBAs on danger signs during pregnancy, delivery and post delivery.

A cross sectional analytical study was done in Geita District in order to achieve the above objectives. The study population was all TBAs in Geita whereby a sample of 233 was involved in the study. Data were collected from the field and analyzed using SPSS computer software.

It has been established in this study that Most TBAs 185 (79.4%) are referring complicated cases to the health facilities however only 60% of those who are referring to the health facilities are referring appropriately. Also it has been found that factors such as training on delivery care, high level of knowledge, being supervised, high level of education, ability to read and write, not using local herbs, living close to the health facilities, improved infrastructure were associated with referring cases to the health facilities.

Improvement in social conditions will be associated with improved appropriate referral from TBAs to the health facilities and thus access to emergency obstetric care (EOC) by pregnant mothers will be increased and maternal mortality ratio will be cut down.

Training of TBAs should be strengthened and focused to recognition of danger signs during pregnancy, delivery and post delivery; and prompt referral of those identified cases to the health facilities.

TABLE OF CONTENTS

ITEMS.....**PAGES**

Certification.....ii

Declaration and copyright.....iii

Acknowledgement.....iv

Dedication.....v

Abstract.....vi

Definition of operational concepts ix

List of abbreviations x

1: 0 **Introduction** 1

1.1 Background 1

1.2 Statement of the problem 4

1.3 Rationale of the study 4

1.4 Research questions 5

1.5 Research Objectives 5

1.5.1 Broad Objective 5

1.5.2 Specific Objectives 5

1.6 **Conceptual Framework**.....6

2: Literature review 7

2.1 Sociodemographic characteristics of TBAs.....7

2.2 How training of TBAs influence referral practice.....7

2.3 How knowledge and practice of TBAs influence them to refer complicated cases ...8

2.4 Referral practice of TBAs.....9

2.5 How experiences affect TBAs to refer cases to the health facilities.....10

2.6 Cultural issues of TBAs.....11

2.7 Attitude of TBAs towards health facilities.....12

2.8 How monetary incentives influence referral practice 12

3: Methodology 13

3.1 Study design 13

3.2 Study area 13

3.3 Study population 13

3.4 Sample size Calculation 14

3.5 Sampling Procedure 14

3.6 Data collection 14

3.7 Data processing and analysis 15

3.9 Ethical clearance.....15

4: Results.....17

5: Discussion.....33

6: Conclusion and Recommendations.....39

7. References.....41

8. Appendix; 1.....45

9. Appendix; 2.....53

10. Appendix; 3.....61

11. Appendix 4.....63

Definitions of Operational Concepts

Traditional Birth Attendant .....In this study, a traditional birth attendant will refer to person who assist mothers at child birth and who initially acquire her skills of delivering babies by working with other TBAs or by herself.

Trained Traditional Birth Attendant .....This is the TBA who has received training on delivery care, organized by the government or NGOs

Un-Trained Birth Attendants .....This is the TBA who has not received training on delivery care, organized by the government or NGOs

Appropriate referral ..... In this study appropriate referral refers to TBAs sending complicated cases to the health facility immediately after identifying a complicated case.

Delayed state of referral to the health facility..... in this study this will refers to sending a complicated case to the health facility after some hours or after some days following detection of complicated case.

High knowledgeable TBAs ..... are those who will score above 21 points on answering a question on danger signs on pregnancy, delivery and post delivery.

Moderately knowledgeable TBAs-------- are those who will score 16 to 20 points on answering a question on danger signs on pregnancy, delivery and post delivery.

Low knowledgeable TBAs------- are those who will score up to15 points on answering a question on danger signs on pregnancy, delivery and post delivery.

List of Abbreviations

AIDS - Acquired Immunodeficiency Syndrome

ANC- Antenatal Clinic

CCHP- Comprehensive Council Health Plan

CHMT-Council Health Management Team

D.C- District Commissioner.

DED- District Executive Director.

DHS- Demographic Health Survey

DMO- District Medical Officer

EOC- Emergency Obstetric Care

FP- Family Planning

GDP- Gross Domestic Product

HIV- Human Immunodeficiency Virus.

LR- Literacy rate

MCH- Mother and Child Health

MMR- Maternal Mortality Ratio

MOHSW- Ministry of Health and Social Welfare

MPH- Masters of Public Health

MUHAS-Muhimbili University of Health and Allied Sciences

PHC- Primary Health Care

PMTCT-Prevention of Mother To Child Transmission

RA-Research Assistant

TBA- Traditional Birth Attendant

TRCHS-Tanzania Reproductive and Child Health Survey

UNICEF-United Nations Children's Fund

WHO- World Health Organization

VC- Voluntary counseling for HIV.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND TO THE PROBLEM

Every year more than 536000 women die due to complications developed during pregnancy and child birth and 10 millions more suffer debilitating illness and life long disability (WHO Report 2005). Over 99% of those deaths occur in the developing world. Seventy five percent of maternal deaths occur during child birth and the post partum period (UNICEF 2009). Most of the maternal deaths are preventable when women have access to vital health care during prenatal, natal and postnatal periods.

Significant numbers of deliveries in the developing world take place at home mostly conducted by TBAs. (Bello et al 2009). This makes mothers delivering at home miss Emergency Obstetric Care and thus increase the risk for maternal complications and deaths.

In Tanzania maternal mortality ratio (MMR) has remained high for the past 10 years without declining despite all the efforts of the Government to make free health services of the mother prenatally, natally and post natally. MMR is currently estimated to be 578 per 100,000 live births compared to 529 per 100,000 live births in 1996 (National Road Map 2006-2010). Geita district has maternal mortality ratio of 241/100000 live birth and the rate of home delivery is 44% (CCHP)

From the facility- based data the direct causes of maternal mortality include;
Hemorrhage, sepsis, unsafe abortion, pregnancy induced hypertension / eclampsia, obstructed labor, ruptured uterus and ectopic pregnancy; The indirect causes are malaria, anemia and HIV/AIDS which is making the situation worse (National road map 2006-2010).

In Tanzania the challenge facing reduction of maternal morbidity and mortality can be categorizes into two parts; (a) Health system factors and (b) Non health system factors. Health system factors include inadequate implementation of policies, poor policies, weak

health infrastructure , limited access to quality health services , shortage of skilled health care providers, weak referral system, unmet need for family planning ,insufficient equipments and supplies, weak health information management system at all levels, and poor funding .(National road map 2006-2010)

None health system factors include inadequate community involvement and participation in planning, implementation, monitoring and evaluation of maternal health services. All the above mentioned factors manifest into three levels of delay in seeking obstetric care: delay in making decision at home to seek health care, delay in transportation from home to health care facilities, and delay in receiving emergency obstetric care at health facilities.

A well functioning referral system is an important element of successful safe motherhood programme. However in most developing countries many health system fail to optimize women assess to EOC due to poor referral system. The most affected women are those who are poor and marginalized especially in rural areas. (Murray et al, 2006)

Ninety four percent women attend ANC at least once; however the quality of the ANC services provided is not adequate; about 65% have their blood pressure measured, and 54% have their blood sample taken for hemoglobin estimation and syphilis screening, about 41% have urine analysis, and only 47% are informed of the danger sign in the pregnancy and child birth. (National road map 2006-2010) Regardless of high ANC attendance in Tanzania it is only 47% of birth which occur in health facilities It has been established that about two third of the maternal death in Tanzania occur in women delivering out side the Health facilities (TRCHS, 1999)

However the National policy on maternal health is for every pregnant woman to deliver at the health facility equipped for emergency obstetric care under skilled personnel, though this is limited by several factors such as hidden cost in terms of what mothers face at health facilities, shortage of drugs and supplies and shortage of staff.

Tradition birth Attendant (TBA) is an institution as old as the birth process is in human species. (Kamal 1998). TBA are easily available, and culturally acceptable in the community. These TBAs form part of tradition health system that exist in various part of the world. They acquire knowledge through apprecinteship with older traditional birth attendants (Kamal 1998).

In Geita district there are both trained and untrained TBAs both of them are serving pregnant mothers especially in rural areas. Majority of TBAs are not trained. (Geita RCH Report, 2010). In Tanzania most (53%) pregnant women are delivering at home and about 19% of those delivering at home are being saved by TBAs. .(National road map 2006-2010)

Home delivery is still a problem in the developing world; In Bangladesh 88% of deliveries occurs at home. (Rowen et al, 2009)There is a training program on TBAs which was done specifically on how to measure blood loss, how to handle an apneic new born, when to refer a woman with convulsion and when to refer a woman when bleeding heavily. Post training evaluation revealed a great degree of improvement among TBAs who received these training (Rowen et al, 2009)

TBAs are accepted in the community and they are highly utilized but they are not enlightened. Doctors are knowledgeable but unavailable because they are facility based, they don't go to the community, for that case it is community skilled birth attendant for Bangladesh. (Tuncalp, 2009)

The decline in maternal mortality in Bangladesh was not due to facility or better staff; it was decreased because of the social development that is decline in total fertility rate (TFR), improvement in literacy rate (LR), and rise in Gross domestic Product (GDP), delayed marriage and child birth, improved infrastructure, improved microcredit and women empowerment (Tuncalp, 2009)

1.2. PROBLEM STATEMENT

The majority of maternal deaths are caused by delivering outside health facilities. Deliveries taking place outside health facilities are likely to be conducted by TBAs. The linkage of referral from TBAs to the health facilities is not well established.(Sibley et al 2004) Some TBAs don't refer mothers and some do refer inappropriately.(Ghebrehiwet et al,2010)

There is inadequate and inconclusive information about the factors which influence the referral practices among TBAs. However some studies established that training status of TBAs, knowledge on danger signs and distance where they stay from health facility do influence the referral practices (Hussein and Mpembeni 2004). No such study has ever been conducted in Geita District. Therefore there is a need to explore more factors influencing referral practices among TBAs

1.3. RATIONALE OF THE STUDY

In order to reduce maternal mortality ratio in Geita District we need to strengthen the referral system from TBAs to health facilities, this will be achieved by conducting this study so as to determine the factors influencing referral practices. The findings of this study will be provided to Geita CHMT so that they can be used to strengthen referral from TBAs to health facilities. Also the results of this study will be shared with MOHSW so as to be used by Policy makers for the sake of reduction of MMR at National level.

1.4 RESEARCH QUESTIONS

1. What are the factors influencing the TBA to refer complicated cases?
2. Which other services do TBAs offer?

1.5. RESEARCH OBJECTIVES

1.5.1 Broad objective: To determine the factors which influence the Referral practices among TBAs in Geita District.

1.5.2 Specific objectives;

1. To establish how sociodemographic characteristics of TBAs influence their referral practices in Geita.
2. To determine how distance from health facility influences TBA referral practices in Geita District.
3. To determine the proportion of TBAs who refer complicated cases to the health facilities.
4. To determine the proportion of TBAs in Geita District who have received training on delivery care.
5. To determine the level of knowledge of TBAs on danger signs during pregnancy, delivery and post delivery in Geita District.
6. To determine other services offered by TBAs

1.6 **Conceptual Framework**

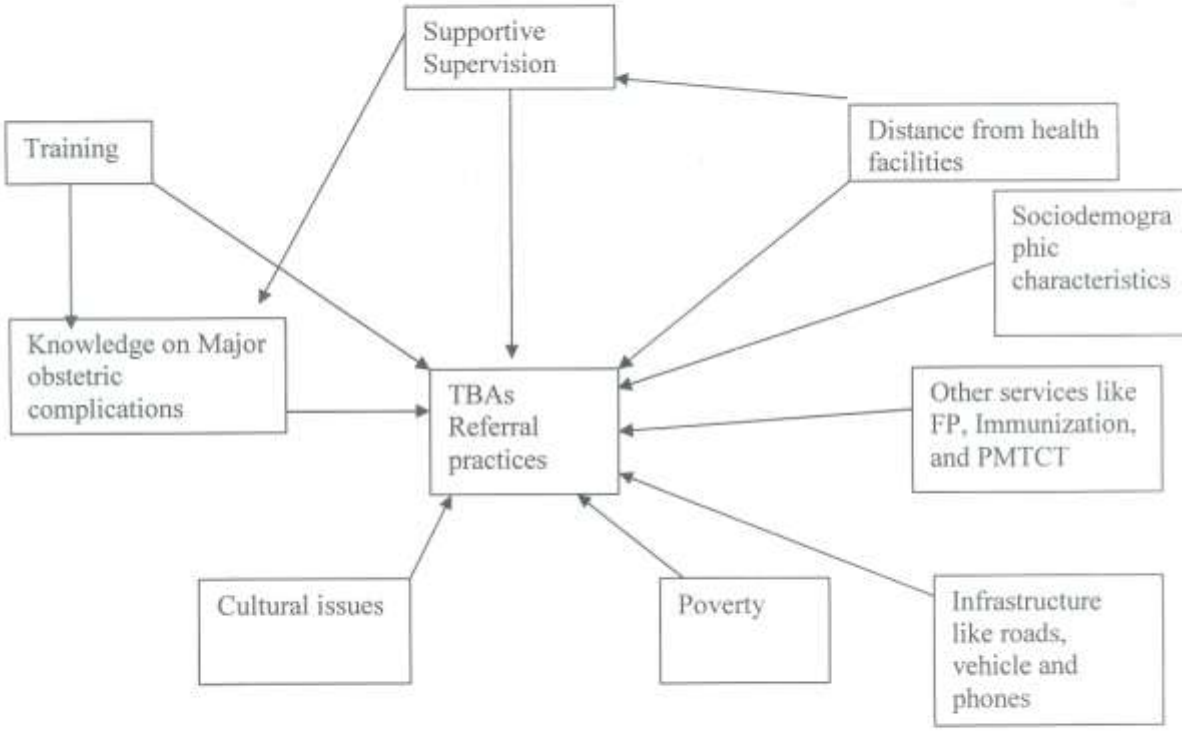


Fig: Conceptual framework showing factors associated with referral practices among traditional birth attendants in Geita District.

CHAPTER TWO

2. LITERATURE REVIEW

2.1: Sociodemographic characteristics of TBAs

TBAs are not only females but also some male are practicing as TBAs. Ofili et al 2005 found 2.2% of male were TBAs. Majority of them acquired their skills through apprenticeship (62.2%).8.9% of TBAs learnt by them selves. Ofili et al 2005 and Hussein et al 2003 found that majority of TBAs (60% and 78% respectively) had no formal education. TBAs with formal education (94.4%) have ever referred complicated cases to health facilities compared to 51.9% of TBAs without formal education. Education was found to be significantly related to the possibility of TBAs to refer difficult cases. TBAs who were educated were more likely refer patient to the health facilities than uneducated TBAs. (Ofili et al 2005)

Chongsuvivatwong et al, 1991 found the literacy rate among TBAs in Thailand was found to be 53%. Where Sing, (1994) revealed that illiteracy rate among TBAs was 85% in rural area North India

2.2: How training of TBAs influence referral practices

Training status may influence TBAs to refer or not .Untrained TBAs may not refer cases to formal health system due to fear of accusation by the health care workers (Bailey et al 2002).Some TBA training programmes focus on training TBAs to refer emergency cases appropriately but other training focus onto improving obstetric services. In Brazil's peri – urban areas TBAs were trained to recognize prenatal conditions and complications of pregnancy and were successful in identifying them and in making referral. The women who were referred more were first deliveries, 35years and above, those with antenatal pathology and lower caseload of TBAs (Janovitz et al. 1988)

Also another study done in rural Bangladesh assessed the impact of training in changing the knowledge and practice of TBAs with regard to antenatal, natal and post natal care of the mother and newborn revealed improved quality of care. Most TBAs (71.2%) had traditional beliefs explaining the cause of neonatal sickness. Training led them to change their belief in favor of infection. Prior to training majority (58%) of the TBAs never used

to make antenatal visits whereas after training 72% of them began to visit antenatally their clients (Begum et al 1990). Itina (1997) found that 98.1% of TBAs needed training before commencing independent practice. However 88% of those wanted training to be conducted by Government health workers (Doctors and nurse-midwives)

2.3: How knowledge and practices of TBAs influence TBAs to refer cases to the health facilities.

Rodgers et al 2004 in their study assessed knowledge and practice among trained and untrained TBAs and found that TBA who were trained were more knowledgeable than un trained since they were able to identify factors which put a woman at high risk for complications of pregnancy or delivery; They mentioned about bleeding before onset of contractions, history of hemorrhage in previous deliveries, extreme ages of the pregnant women, null parity, grand parity, sign of pre-eclampsia, sign of low blood pressure before and after delivery, sign of malpresentation, fever during labor, sign of urinary tract and vagina infections in laboring patient. No incorrect responses were recorded from TBAs in the trained group.

In rural Nepal, a study was conducted to assess the knowledge, attitude and practice about maternal and newborn health, found that clean delivery practices were observed by most TBAs however there were no standard practice to identify maternal complications such as excessive bleeding, prolonged labor, or retained placenta. (Thatte et al 2009)

Apart from assisting normal delivery which was performed by 71.4%, TBAs were found to perform other activities such as providing advice on prevention of HIV/AIDS (36%), Advice on immunization (35.4%), However a higher proportion of trained TBAs were providing family planning services (52.2%), giving advice on infant and young child feeding (60.5%) and examining pregnant women (30.4%) compared to un trained TBAs (18.1%,12.7%and 7.3% respectively).These finding were statistically significant ($P<0.05$) Both trained and untrained TBAs had approximately the same proportion in giving pregnant women herbal medications (13%). None of the trained TBA reported assisting

complicated deliveries in contrary to untrained TBAs whereby some of them reported to assist complicated deliveries. (Masemba, 2004)

Also a study done by Ofili et al 2005, found that TBAs were providing a broader range of reproductive health services; 53.3% of TBAs were providing ANC; 60% were providing infertility treatment service; 13.3% were managing threatened abortion and 28.9% were circumcising the male babies.

While providing ANC, the methods used to assess for risk was careful observation of the patients (31%), divination (17.8%), womb palpation (15.6%) and using patients history and complaints (13.3%)

2.4: Referral practices of TBAs

Singh, (2006) did a case study on relevance of trained traditional birth attendants in maternal health and discovered that over 85% of TBAs referred complicated cases to Governmental Hospitals, 47.5% of TBA referred to private hospitals, 38.3 referred to NGO hospital. Over 90% referred postpartum complication cases, 99.2% referred cases with fits, and 99.8% referred for difficult labor, 88.3% referred cases with severe bleeding. 84.2% referred cases with fever during labor or postpartum. About 80% didn't refer cases with prolonged labor. Study done by Sindiga (1995). On the participation of TBAs in PHC revealed that only14% would refer a pregnant woman with convulsion to a hospital

Rogers et al (2004) conducted a study to evaluate referral practices against training status and found that about 10 cases out of 30 who were attended by trained TBAs were referred to the health facilities due to an old patient, history of placenta praevia, too young patient, and too big baby. However not all who were referred did go to the health facility, due to lack of money, long distance and lack of some one to accompany them. Untrained TBAs attended 32 cases and none of them was referred.

A study conducted in Mkuranga District, Tanzania to assess recognition of high risk pregnancies and referral practices among TBAs revealed 86.5%of the TBAs had not received any training, trained TBAs had much knowledge on danger signs during

pregnancy and child birth and were more likely to refer women with complications to health facilities compared to un trained TBAs. (Hussein and Mpembeni, 2005)
Also TBAs who were supervised regularly tended to refer more clients for they felt positive attitude towards the health system. (UNFPA Report, 1996). Sometimes TBAs do refer their clients, but a significant number of their clients do not comply to the referral advices due to the following reasons; financial constraints, lack of transportations and fear of disrespectful or painful treatment from medical staff

Itina (1997), conducted a study and found that a total of 72 % of maternal death occurred among patients who were unregistered for hospital antenatal care or who were registered but attempted delivery with TBAs. The cases which were referred by TBAs arrived late in hospital and most of them died within 24 hours of admission. TBAs contributed to 24% of the maternal death in that hospital.

2.5: How experience affect TBAs to refer cases to the health facilities

A study done by Chongsuvivatwong et al (2005), found that majority of the TBAs had experience with complicated labor but only 30% referred, perhaps due to excessive self confidence and supernatural beliefs.
Ofili et al (2005) established that 40 % of TBAs claimed that they could handle all the different types of cases that are brought to them including complicated cases. Management of complicated cases by TBAs was poor as only 44% would refer cases of obstructed labor, 40% of them would refer cases of retained placenta and 33.3% would refer cases of severe bleeding to the health facilities.

The study done by Ofili et al (2005) found that 40% of TBAs declared that they could handle all the cases whether complicated ones or normal. Among those TBAs who do refer complicated cases, 60% of them advised patients to go to the health facilities, 8.9% of them invite other TBAs, 6.7% appease the gods, 0nly 2.2% contact Doctors. Generally management of delivery complications was poor as only 44.4% do refer cases of obstructed labor, and 40% of TBAs do refer cases of retained and only 33.3%will refer cases of severe bleeding to modern health system.

A study done by Abioye-Kuteyi et al on the role of TBAs found that 80.8% of TBAs did not consider any pregnant woman to be at high risk where by only 46.2% never refer patient at all.

2.6: Cultural issues of TBAs

Maimbolwa et al 2003 did a study on cultural childbirth practices and beliefs in Zambia found that some TBAs do advice expectant mothers to give birth at home due to cultural issues such as, the use of traditional medicine for widening the birth canal and precipitation of labor. If a mother got complications they rely on traditional belief and witch craft to explain the misfortune and expect the laboring mother to confess her bad behavior.

A study done by Masember 2004, found that TBAs do practice cultural issues such as herbal medication, ritual ceremony for twins or breech delivery, and hot water compression on the back and waist to restore muscle strength.

A study done by Itina (1997), found that most TBAs could use local herbs to manage post partum bleeding rather than to refer to the health facility. Some TBAs gave local herb other used fundal pressure to overcome obstructed labor. Other form of management included prayer, fasting and sacrifices when TBAs got complicated cases.

In the study done by Ofili et al (2005), it was found out that TBAs who had no formal Education (59.3%) were using rituals in patient management compared to those TBAs with some education (22.2%) and this difference was found to be statistically significant. The type of medication being given to complicated cases were leaves (64.4%) roots (62.2%), also animal waste products such as cow dung and cow urine were used as medication.

2.7: Attitude of TBAs towards health facilities

Attitude of TBAs towards health facilities and health workers can either hinder or facilitate referral of their clients to the health facilities. When TBAs are not supported neither supervised they tend to have negative attitude towards health facilities and health workers, and this become a hindering factor to referral (Okafor et al, 1994)

Ileum's et al, (2008) did a study and found that 84.4% of the TBAs claimed to have good collaboration with modern health facilities staff. And when they encounter complicated cases they referred to the health facility.

For TBAs living and practicing far away from health facilities, poor roads and lack of vehicles are perceived as barriers of referring their client to the health facilities. This was revealed in the study done by A. Hussein and R. Mpembeni who found that 17.8% of TBAs reported that bad roads is the hindering factor for the referred women to go to the health facilities, 13.3% of TBAs mentioned long distance to the health facility as a barrier to the referral. (Hussein et al 2005)

2.8: How monetary incentives influence referral practices

When TBAs referred complicated cases to the health facilities they receive monetary incentives and do accompany a woman to the health facility and stay with her all the time. Monetary incentives lead to increased compliance TBAs to refer complicated cases to health facilities. (Fatmin et al 2005)

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Area

This study was done in Geita District because there is high maternal mortality rate (241/100,000 live birth and high home delivery percent (44%)

.

Administration

Geita district is divided into 7 divisions, 33 Wards, 187 Villages and 874 hamlets. The district borders Muleba district to the North, Sengerema district to the East, Misungwi district to the South and Chato district to the West.

Geita district has one hospital, 8 Health centers and 38 Dispensary of Government institutions, and 8 dispensaries of private.

(District planning office-Geita D.C.2008)

Population

Geita District had a total population of 866, 597 whereby male 432,722 (National census 2002). The under fives were 168,145, women of reproductive age were 187,331

The population literacy rate in the district is 42%, Population growth rate is 3.4% and Total fertility rate 6.5%

3.2 Study Design

The design of this study was Cross Sectional analytical study.

3.3 Study Population

TBAs in Geita District.

3.3.1 Inclusion criteria

TBAs who are actively providing delivery care.

3.3.2 Exclusion criteria

TBAs who have stopped to provide delivery care for more than three years.

3.4 Sample size Calculation

The sample size was calculated using the following formula.

$$n=\frac{z^2 \cdot p(100-p)}{e^2}$$

Where n = the required minimum sample size.

z = standard normal deviate corresponding to 95% confidence level (=1.96)

p =Estimated proportion of TBAs who refer women with complications during pregnancy, set at 55%. (Hussein and Mpembeni 2005)

e= margin of error on p; put on 7%

$$n=\frac{3.8*55(100-55)}{7^2}$$

$$=194$$

The calculated minimum sample size was 194

Due to design effect this figure was multiplied by a factor of 1.2 making a sample size to be 233

3.5 Sampling Procedure

Based on the District administrative set up, multistage sampling was used where by in first stage a sample of 10 wards were selected out of given 33 wards by simple random sampling. Out of those selected wards 34 villages were selected by simple random sampling method. From the estimated Sample size of 233, an average of 7 TBAs were obtained from each village by the help of village leaders, village health workers other TBAs and villagers; however TBAs who were found in the villages were taken.

3.6 Data collection

Data were collected by interviewing TBAs at their homes. The questions in the questionnaires were translated into Swahili language, to ensure that they are understandable to the TBAs by maintaining their original meaning. Three research assistants were trained for one day on data collection technique and were explained the importance of the study.

Pretest of the questionnaire was done to test for content and clarity of questionnaire items. This was done to 7 TBAs in Mugusu village in Geita.

3.7 Data processing and analysis.

Quality Control of data

Supervision of research assistants was done regularly to ensure that questionnaires were well filled. Every day after data collection the research team met to review the filled questionnaires to ensure that they were completely and correctly filled.

Data were entered to the computer for analysis using SPSS program. Frequency distribution and cross tabulations were used to present the data. Categorical data were analyzed using χ^2 test at a significance level of 0.05. For variables which were significant in univariate analysis were further analysed by logistic regressions

Variables; Dependent variable; Referral practices

Independent variables; Training, Knowledge on major obstetric complications(danger signs),cultural issues, level of income of TBAs, payment expectation for the service delivery, Supportive supervision, Distance from health facilities, Infrastructure like roads, vehicle. Questions were set to assess the association of each independent variable to the dependent variable.

Knowledge on danger signs was measured by objective test in the format of Yes/No, type of questions. Reponses were scored. Knowledge scale was constructed by marking all the test items, total score for each respondent was obtained and the score was arranged in ascending order. Cut off points which reflect different levels of knowledge was made whereby in this study up to 15 points regarded as low level of knowledge, 16 to 20 points

regarded as moderate level of knowledge and above 21 points regarded as high level of knowledge.

Age groups which was used in this study were less or equal to 35 years, 36 to 54 years and above or equal to 55 years because most of the TBAs were female and those less or 35 years are younger, those 36 years to 54 years are middle aged and those 55 years and above are elderly so each sub group might have its own characteristics as far as referral to the health facilities is concerned.

Referral of TBAs was assessed by a question which was asking, What the TBA do when she/he encounters a complicated case. And for those who responded to refer complicated cases to the health facility another question was asked, how long it takes to refer a complicated case.

3.8 Ethical considerations.

The proposal was submitted to MUHAS Research and Publication committee for ethical clearance. After ethical clearance, permission to conduct this research was asked by sending a letter to District, Ward and Village authorities. Each TBAs involved in the study was explained the importance of this study and was requested to be interviewed and was told that he/she was free to withdraw from the interview any time., and was assured for confidentiality that no name was written in the questionnaire. And the information which was given was secret.

CHAPTER FOUR

4.0: RESULTS

4.1 Relationship between referral to the health facilities with social demographic characteristics

Out of 233 TBAs who were interviewed, 185(79.4%) referred complicated cases to the health facilities. Majority of them were in the age group of 36-54 years 149(63.9%) with mean age of 47.9, who ranged from 26 to 72.Those TBAs, who were in the age group of 36-54,130 (87.2%) referred cases to the health facility more than other age groups. This difference was statistically significant ($P<0.05$). Among those interviewed TBAs, majority was female (94.8%)

Those who had completed primary school, 108 (94.7%) referred complicated cases to the health facilities than those who have never gone to school or have not completed primary school. This difference was statistically significant ($P<0.05$). Out of 233 TBAs 84 (36.1%) didn't know how to read and write; and those who knew to read and write133 (89.3%) referred cases to the health facilities more compared to those who didn't know how to read and write 52 (61.9%). This difference was statistically significant. ($P<0.05$) as shown in Table 1.

Table1. Referral status by socio demographic characteristics and economics

Socio demographic characteristics	Referral to the health facilities			χ^2 p-value
	Referring to the health facilities (%) N=185 (79.4)	**Not referring to the health facilities (%) N=48(20.6)**	**Total N=233(100)**	
Age group				
≤35	19(86.4)	3(13.6)	22(9.4)	
36-54	130(87.2)	19(12.8)	149(63.9)	
≥55	36(58.1)	26(41.9)	62(26.6)	χ^2= 23.5 P<0.05
Education Level				
Completed primary school	113(94.2)	7(5.8)	120(51.5)	
Not completed primary School	28(70)	12(30)	40(17.2)	
Never gone to school	44(60.3)	29(39.7)	73(31.3)	χ^2=35 P<0.05
Ability to write and read				
Yes	133(89.3)	16(10.7)	149(63.9)	
No	52(61.9)	32(38.1)	84(36.1)	χ^2=24.6 P<0.05

4.2: Relationship between referral to the health facilities with level of income and payment expectations on service delivery.

Out of 227 TBAs who responded on their level of incomes per year, majority 171 (75.3%) were in the medium level of income.

Those TBAs with higher level of income 14 (93.3%) referred cases to the health facilities than other level of income, thou this difference was not statistically significant (P>0.05).

Those TBAs who were not expecting to be paid for the services 159 (89.8%) referred cases to the health facilities more than those who were expecting to be paid for the service. This difference was statistically significant as shown in Table 2

Table 2: Referral status by level of income and Payment expectations

Level of income	**Refer to the health facilities**			**χ^2,P-value**
	Referring to the health facilities (%)	**Not referring to the health facilities (%)**	**Total**	
Low (less than 100000/= Tsh)/yr	33(80.5)	8(19.5)	41(18.1)	
Medium 100001 - 200000 Tsh	132(77.2)	39(22.8)	171(75.3)	
High(>200001)	14(93.3)	1(6.7)	15(6.6)	
TOTAL	**179(78.9)**	**48(21.1)**	**227(100)**	χ^2=2.2 P>0.05
Payment expectations after service delivery	**Referring to the health facilities (%)**	**Not referring to the health facilities (%)**	**Total**	
Expecting payments	26(46.4)	30(53.6)	56(24)	
Not expecting payment	159(89.8)	18(10.2)	177(76)	
Total	**185(79.6)**	**48(20.6)**	**233(100)**	χ^2=49 P<0.05

4.3 Relationship of referral to the health facilities with distance from health facilities and level of the health facilities.

Out of 233 TBAs, 144 (61.8%) TBAs lived in less or equal to 5 Kms.

Those TBAs who live close (within 0-5km) to the health facility, 130 (90.3%) referred cases to the health facilities more than those who live beyond 5 Kms. This difference was statistically significant (P<0.05)

Majority of TBAs 109 (46.8%) lived near to the Dispensary, however TBAs who were close to the hospital (91.7%) refer more than those who were close to the dispensary (76.1%) and health center (73.4%). This difference was statistically significant (P<0.05) as shown in Table 3

Table 3. Relationship of referral to the health facilities with distance from health facilities and level of the health facilities.

Distance from health facilities(KM)	**Refer to the health facilities**			**χ^2,P-value**
	Referring to the health facilities (%)	**Not referring to the health facilities (%)**	**Total**	
0-5(close)	130(90.3)	14(9.7)	144(61.8)	
6-10(far)	33(61.1)	21(30.9)	54(23.2)	
>10(very far)	22(62.9)	13(37.1)	35(15)	
Total	185(79.4)	48(20.6)	233(100)	χ^2=27 P<0.05
Level of nearest health facilities	**Referring to the health facilities (%)**	**Not referring to the health facilities (%)**	**Total**	
Dispensary	83(76.1)	26(23.9)	109(46.8)	
Health center	47(73.4)	17(26.6)	64(27.5)	
Hospital	55(91.7)	5(8.3)	60(25.8)	χ^2=7.6
Total	185(79.4)	48(20.6)	233(100)	P<0.05

4.4: Relationship between referral to the health facilities with road usage and mode of transport to the health facilities

Out of 233 TBAs, 180 (77.3%) TBAs lived where the road is useful throughout the year TBAs who lived in the place where the road is useful throughout the year (84.4%) referred cases to the health facilities more than those who live in the place where the road is not useful throughout the year (62.2%). This difference was statistically significant (P< 0.05) Majority of TBAs used bicycle as a mode of transport. Those TBAs who used bicycle as the means of transport (81.8%) referred cases to the health facilities more than those who use public transport (66.7%) and foot (76.4%) This difference was not statistically significant (P>0.005) as shown Table 4

Table4; Relationship between referral to the health facilities with road usage and mode of transport to the health facilities

Road usage	**Refer to the health facilities**			**χ^2,P-value**
	Referring to the health facilities (%)	**Not referring to the health facilities (%)**	**Total**	
Road useful throughout the year	152(84.4)	28(15.6)	180(77.3)	
Road not useful throughout the year	33(62.2)	20(37.7)	53(22.7)	χ^2=12.3 P<0.05
Total	**185(79.4)**	**48920.6)**	**233(100)**	
Mode of transport	**Referring to the health facilities (%)**	**Not referring to the health facilities (%)**	**Total**	
Public transport	2(66.7)	1(33.3)	3(1.3)	
Bicycle	108(81.8)	24(18.2)	132(56.7)	
Foot	75(76.5)	23(23.5)	98(42.1)	χ^2=1.3 P>0.05
Total	185(79.4)	48(20.6)	233(100)	

4.5: Relationship between referral to the health facilities with TBAs source of skills

Majority of TBAs 98 (42.1%) learnt their skills from other TBAs, however those TBAs who learnt their skills from health workers (97.8%) referred cases to the health facilities than those who learnt from other TBAs (74.55%), self taught (74.6%) or learnt from older female relatives (78.3%). This difference was statistically significant. ($P<0.05$) as shown in Table 5

Table5. Relationship between referral to the health facilities with TBAs source of skills

	Refer to the health facilities			**χ^2,P-value**
Source of skills	**Referring to the health facilities (%)**	**Not Referring to the health facilities (%)**	**Total**	
Self taught	50(74.6)	17(25.7)	67(28.8)	
A health worker	44(97.8)	1(2.2)	45(19.3)	
Another TBA	73(74.55)	25(25.5)	98(42.1)	
Old female relative	18(78.3)	5(21.7)	23(9.9)	χ^2=12 P<0.05
Total	185(79.4)	48(20.6)	233(100)	

4.6: Relationship between training on delivery care with referral to the health facilities and referral timing.

Out of 233 TBAs, 80 (34.3%) received training on delivery care, those TBAs who received training on delivery care 78 (97.5%) referred cases to the health facilities compared to those who didn't receive training.107 (69.9%). This difference was statistically significant. ($P<0.05$)

Out of 185 TBAs who referred cases to the health facilities, 110(59.55) TBAs were referring on time. Among those TBAs who received training, 55 (70.5%) TBAs referred on time compared to those who didn't receive training 55 (51.4%) as shown in Table 6.

Table6: Relationship between training on delivery care with referral to the health facilities and referral timing.

Referral to the health facilities	**Training on delivery care**			**χ^2,P-value**
	Yes (%)	**No (%)**	**Total**	
Yes	78(97.5)	107(69.9)	185(79.4)	
No	2(2.5)	46(30.1)	48(20.6)	
Total	80(34.3)	153(65.7)	233(100)	$\chi^2=24$
				P<0.05
Referral timing	**Yes (%)**	**No (%)**	**Total**	
On time	55(70.5)	55(51.4)	110(59.5)	
Not on time	23(29.5)	52(48.6)	75(40.5)	
Total	78(42.2)	107(57.8)	185(100)	$\chi^2=6.8$
				P<0.05

4.7: Relationship between level of knowledge on danger signs during pregnancy, delivery and post delivery with referral to the health facility

Out of 233 TBAs, 118(50.6%) had moderate knowledge of danger signs during pregnancy, delivery and post delivery, however TBAs who had high level of knowledge (92.6) referred cases to the health facilities than those who had low(63.6%) and moderate (88.1%) level of knowledge. This difference was statistically significant. ($P<0.05$) as shown in Table7.

Table 7; Relationship between level of knowledge on danger signs during pregnancy, delivery and post delivery with referral to the health facility

Refer to the health facilities	**Level knowledge**			
	Low (%)	**Moderate (%)**	**High (%)**	**Total**
Yes	56(63.6)	104(88.1)	25(92.6)	185(79.4)
No	32(36.4)	14(11.9)	2(7.4)	48(20.6)
Total	88(37.8)	118(50.6)	27(11.6)	233(100)
χ^2=22, P <0.05				

4.8: Relationship of TBA being supervised or not with referral to the health facilities

Out of 233 TBAs, only 30 (12.9%) were supervised. whereas all TBAs who were supervised (100%) referred cases to the health facilities compared to those who were not supervised (76.4%). This difference was statistically significant (P<0.05) as shown in Table 8

Table 8. Relationship of TBA being supervised or not with referral

Referral to the health facilities	Supervision status			χ^2,P-value
	Supervised (%)	Not supervised (%)	Total	
Yes	30(100)	155(76.4)	185(74.4)	
No	0(0)	48(23.6)	48(20.6)	
Total	30(12.9)	203(87.1)	233(100)	χ^2=9 P<0.05

4.9: Relationship between local herb usage with referral to the health facilities and referral timing.

Out of 233 TBAs, 68(29.2%) used local herbs to manage cases. Majority (97%) who were not using local herbs referred cases to the health facilities compared to those who used local herbs (36.8%) This difference was statistically significant, (P<0.05). Also those TBAs who did not use local herbs referred on time than those who used local herbs, this difference was statistically significant, (P<0.05) as shown Table 9

Table 9. Relationship between local herb usage with referral to the health facilities and referral timing.

Refer to the health facilities	Local herb usage			X^2,P-value
	Yes (%)	No (%)	Total	
Yes	25(36.8)	160(97)	185(79.4)	
No	43(63.2)	5(3)	48(20.6)	
Total	68(29.2)	165(70.8)	233(100)	χ^2=106 P<0.05
Referral timing				
On time	6(24)	104(65)	110(59.5)	
Not on time	19(76)	56(35)	75((40.5)	
Total	25(13.5)	160(86.5)	185(100)	χ^2=15 P<0.05

4.10: Relationship of duration of practice with referral to the health facilities and referral timing

Out of 233 TBAs, about fifty percents of TBAs had practiced for 11 and above years.

Those TBAs who practiced for 11 and above (66.4%) referred less to the health facilities than those who practiced for less than or 4 years (80.4%) and 5-10 years (97.3%). This difference was statistically significant (P<05)

Those TBAs who had practiced for less than or 4 years (71.4%) referred on time more compared to those who had practiced for 5-10 years (66.7%) and 11 and above years (45.1%) as shown in Table 10

Table10: Relationship of duration of practice with referral to the health facilities and referral timing

Refer to the health facilities	**Duration of practice**			
	0-4(%)	**5-10(%)**	**11 and above (%)**	**Total**
Yes	42(80.4)	72(97.3)	71(66.4)	185(79.4)
No	10(19.2)	2(2.7)	36(33.6)	48(20.6)
Total	52(100)	74(100)	107(100)	233(100)
χ^2=25 P=0.000				
Referral timing				
On time	30(71.4)	48(66.7)	32(45.1)	110(59.5
Not on time	12(28.4)	24(33.3)	39(54.1)	75(40.5)
Total	42(100)	72(100)	71(100)	185(100)
χ^2=10 P<0.05				

4.11: Frequencies of other services provided by TBAs.

Most TBAs were advising on immunization (30.9%), followed by family planning (27.9%).The least other service provided was VC (5.6%) as shown in Table 11.

Table11. Frequencies of other services provided by TBAs.

Other health services	Frequencies	Percentages
Family planning	65	27.9
VC	13	5.6
General health education	37	15.9
Treating infertility	25	10.7
Correct breast feeding promotion	22	9.7
Advice on Immunization	72	30.9
Reproductive advice to adolescents	15	6.4
None	58	24.9

4.12 APPLICATION OF INDEPENDENT VARIABLES INTO MULTVARIATE ANALYSIS (LOGISTC REGRESION ANALYSIS)

4.12a: Omnibus Tests of model coefficients

The model is the good one since the set of results are highly significant. (P value is less than 0.05) Table 12a

Table: 12a Omnibus Tests of model coefficients

		Chi-squire	Df	Sig
Step 1	Step	137.54	18	.000
	Block	137.54	18	.000
	Model	137.54	18	.000

4.12b: Model Summery

The value of .462 and .702 suggest that between 46.2% and 70.2% 0f of the variability is explained by this set of independent variables.

Table 12b: Model Summery

Step	-2log like hood	Cox and Snell R squire	Nagelkeke R squire
1	97.662	.462	.702

4.12c: Hosmer and Lameshow test

The P value in this case is .995 which is greater than 0.05 that mean this test support the model to be good one

Table12c: Hosmer and Lameshow test

Step	Chi squire	Df	Sig
1	1.358	8	.995

4.12d: Variables in the equation

The use of local herbs medications is the only predictor that contributes significantly to the predictive ability of the model.

Table 12d: Variables in the equation

Step 1	B	SE	Wald	Df	Sig	Exp B	95%CI for Exp B	
							lower	Upper
Income	.538	1.706	.099	1	.753	1.712	.060	48.49
Duration	.823	.991	.691	1	.406	2.278	.327	15.88
Agegrp	.161	1.273	.016	1	.899	1.175	.097	14.24
Distance	-1.197	1.295	.855	1	.355	.302	.024	3.82
Localherb	3.23	.655	24.314	1	.000	25.217	6.991	90.958
Supervision	-16.718	6678.9	.000	1	.998	.000	0.000	-
Training	-1.089	1.011	1.161	1	.281	.337	.046	2.44
Paid	1.165	.637	3.349	1	.067	3.207	.921	11.175
Learntskills	-.350	.315	1.233	1	.267	.705	.380	1.307
Edulevel	.259	.587	.195	1	.659	1.296	.410	4.095
Read &write	-.652	.952	.469	1	.493	.521	.081	3.365
Road usage	-.154	1.034	.022	1	.881	.857	.113	6.501
Knowlev	-.724	.958	.570	1	.450	2.062	.315	13.486
Constants	-3.69	3.037	1.476	1	.224	.025	-	-

CHAPTER FIVE

5.0 DISCUSSION

5.1 Relationship between referral to the health facilities with social demographic characteristics.

This study involved 233 TBAs whereby 79.4% of them are referring complicated cases to the health facilities, this high percentage of TBAs who are referring complicated cases to the health facilities is also documented in the study done *by Masemba, (2004)* and *Sing (2006)*.This means that most of the TBAs are aware that complicated cases need to be sent to the health facilities May be this is due to increased mass media campaign on safe motherhood, however in this study it was established that only sixty percents of those who were referring complicated cases to the health facility could refer on time or appropriately

In this study it was found that there is a significant association of level of education and ability to read and write with referring complicated cases to the health facilities, may be this is due to the factor that education increase exposure to various matters, including safe motherhood. As in Tanzania there is extensive campaign on increasing the proportion of people to complete primary school and even to join secondary school so there shall be an increase in referral rate from TBAs who will have been to school. So improvement in social conditions such as in education will lead to reduction in maternal death as it is explained in the study done by*Tuncalp, (2009)*.

5.2 Relationship between referral to the health facilities with economic status

Poverty in rural areas in one of the factor which limit TBAs to refer complicated cases to the health facilities. As it was found in this study hat TBAs who expect to be paid for the delivery care services provision are referring complicated cases to the health facilities less compared to those who don't expect to be paid for the services. This is explained also in the study done by *Fatmin et al, (2005)*.

5.3 . Relationship of referral to the health facilities with distance from health facilities and level of the health facilities.

Staying close to the health facility is associated with TBAs referring complicated cases to the health facilities. This is because being close to the health facility becomes easy to take the patient there. How distance to the health facilities affect TBAs to refer complicated cases was documented by *Hussein et al, 2005.*

However there may be other factors which may hinder TBAs who are close to the facility to refer cases such as poor services at the health facility. It has been found in this study that many TBAs are living close to the dispensaries because these are the ones which are available in villages and the Government is on the plan to build a dispensary to each village, however it was found that TBAs who are close to the Hospital are referring cases more than those TBAs who are close to the Dispensary and the health center. May be this is due to the improved quality of care at the hospital more than to the lower level.

5.4 Relationship between referral to the health facilities with infrastructure

Improved infrastructure is associated with improved referral practice among TBAs since it becomes easy to send their clients to the health facilities; this has been shown in this study that TBAs whose place of residence is in good infrastructure are referring more than those TBAs who live in poor infrastructure. This also was documented in the study done by*Tuncalp, (2009).* Also the mostly used mode of transport is bicycle since this is the one so popular in this place, though it is less comfortable to transport a pregnant mother on the bicycle.

5.5 Relationship between referral to the health facilities with TBAs sources of skills.

There are many ways through which TBAs acquire their skills. In this study it was found that most TBAs acquire their skills by learning from other TBAs as it was found in the study done by *Ofili et al, (2005).*This is contrary to what was found by *Hussein et al, (2005)* that majority of TBAs learnt their skills from a female relative. This difference may be is due to cultural diversity between these two study populations. But acquisition of skill from health workers is associated with referring complicated cases to the health facilities. May be this is due to the fact that those TBAs who acquire skills from health

workers regards health workers superior to them, so whenever they encounter complicated cases they know that the best place to send their clients in to the health workers who are located in the health facilities.

5.6 Relationship between training on delivery care with referral to the health facilities and referral timing.

It has been established in this study that low proportion of TBAs has been trained on delivery care. This also is documented in the study done by *Masemba,(2004)* and *Hussein et al,(2005).*This low proportion is due to the fact that there are there are no more training activities for TBAs on delivery care and some of the TBAs who were trained have died , and other have migrated from the study area. However in this study it has been found that there is a statistically significance association between being trained on delivery care and referring complicated cases to the health facilities. This is because training brings awareness on danger signs and the way to act upon .Also training brings a link between TBAs and modern health system that is why TBAs who are trained are referring complicated cases to the health facilities than untrained TBAs. Even in the study done by *Hussein et al, (2005)*, *Masemba, (2004)* and *Rogers et al,(2004)* found the same. Also it was found in this study that training of TBAs on delivery care had an influence on referring on time or appropriately. This is because training is a motivation to TBAs in linking them to formal health system apart from awareness rising on danger signs. When they receive training they receive monetary gain that is why they are likely to comply with the teachings. And one of their complaints in the field is why there are no more training for them nowadays.

5.7 Relationship between level of knowledge on danger signs during pregnancy, delivery and post delivery with referral to the health facilities.

Majority of TBAs in this study have moderate level of knowledge on danger signs during pregnancy, delivery and post delivery period. This is in contrary to what was found in the study done by *Hussein et al, (2005)* who found majority of TBAs having low level of knowledge on danger signs during pregnancy and child birth. This difference in level of knowledge is may be due to difference in time when the study was conducted or may be

the difference can be due to increased exposure on danger signs through improved media campaign on danger signs in this country. TBAs' level of knowledge on danger signs has a significant association with referring complicated cases to the health facilities since high proportion of TBAs with high level of knowledge are referring more than other level of knowledge. This is also documented in the study done by *Hussein et al, (2005)*

5.4 Relationship of TBAs being supervised or not with referral to the health facilities.

High proportions (87.1%) of TBAs in Geita have not been supervised. This is because TBAs are no longer regarded as important component in maternal health care provision. So even when the CHMT members go to the village for supervision they don't look for TBAs and what they are doing in the field. They are just concerned with the supervision of professional health workers who are located in the health facilities while in reality a big proportion of pregnant mothers are still delivering at home (Bello et al 2009) Also in this study it has been found that there is a significant association of being supervised and referring cases to the health facilities since all (100%) TBAs who were supervised referred cases to the health facilities compared to those who were not supervised (76.4%) This is because supervised TBAs feel a positive attitude towards a formal health system and feel being respected in their work. This is similar to what was documented in *UNFPA Report, (1996)* and *Okafor et al, (1994)*

5.9 Relationship between local herbs usage by TBAs in managing cases with referral to the health facilities and referral timing.

In this study it was found that the majority (70.8%) of TBAs are not using local herbs to manage cases. May be this is due to increased awareness of the importance of using modern medications and improved ANC services. Also in this study it has been established that TBAs who are using local herbs are referring less compared to those TBAs who are not using local herbs .Probably this is due to the fact that when the TBA is using local herb do retain their client and continue managing her even if the client is a candidate to be referred. TBAs using local herbs have been a hindering factor to refer a client to the health facilities. This also is explained in the study done by *Itina, (1997).*

Even for those TBAs who are referring to the health facilities, using local herbs is a limiting factor to refer on time or appropriate. This is because those TBAs having the habit of giving local herbs to their clients will respond to the complicated cases by giving local herbs and waiting for response, if the cases doesn't respond to the local medication its when they plan to refer the cases to the health facility. By this time the cases are too late to get to the health facility and thus the consequences of maternal death and or perinatal death continue to be a problem.

5.10 Relationship of duration of practice by TBAs with referral to the health facilities and referral timing.

Longer durations in practicing delivery care by TBA are significantly associated with less referral practice to the health facilities. This has been established in this study since it was found that TBAs who have practiced delivery care services for long duration are referring complicated cases less to the health facilities compared to TBAs who has practiced for short duration. Also experience affects appropriate referral to the health facilities, since it has been found in this study that those who has practiced for short duration are referring appropriate than those who has practiced for long time.. This is also explained by *Hussein et al, (2005)*

5.11 Other health care services offered by TBAs.

TBAs are not involved in delivery care only, but they are also involved in other health care services. In this study it was established that high proportion of TBAs is involved in advising on immunization ,followed by family planning while the least is VCT services provision .High proportion advising on immunization may be is due to high campaign on immunization going on in this country and this campaign do involve TBAs . VCT services have not involved non professional health workers in Geita district. This is in contrary to what was found by *Masemba,(2004)*, who found majority to be involved in giving advice on infant and young child feeding and *Ofil et al, (2004)* who found majority to be involved in infertility treatment services.

5.12 Prediction of TBAs to refer by independent variable

After application of logistic regression to the set of independent variable only the use of local herbs was found to be a significant predictor of TBAs to refer complicated cases to the health facilities. This means use of local herbs is the major factor influencing TBAs to refer complicated cases to the health facilities. Most of the studies on TBAs referral practices did not involve multivariate analysis.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

In this study it has been found that most traditional birth attendants are referring complicated cases to the health facilities. However, only 60% of those who are referring are referring appropriately. There are factors which have been established in this study to facilitate TBAs to refer complicated cases to the health facilities. These factors include; training on delivery care; ability to read and write; being close to the health facility; improved infrastructures; high level of knowledge on danger signs during pregnancy; delivery and post delivery; being supervised; less duration of practice; skills acquisition from health care workers and TBAs not using local herbs.

However general improvement in social conditions such as increasing the percentage of women who complete primary school as well as secondary school, increasing the percentage of women who know how to read and write, infrastructures such as roads, building health facilities which will be close to people will lead to improvement in referral of cases by TBAs and hence increased accesses to EOC by pregnant mothers and maternal death will be cut down.

6.2. Recommendations

A. At the District level

1. Training of TBAs should be strengthened and focused to recognitions of danger signs during pregnancy, delivery and post delivery; and prompt referral of those identified cases to the health facilities. This should be done by CHMT at least twice per year by using seminars and workshops to TBAs.

2. CHMT members should budget for supervising both trained and untrained TBA since supervision is a motivator to TBAs to refer cases to the health facilities.

3. The government at council level should continue to improve social services such as education for all, health care for all, and infrastructure so as to improve maternal health outcomes.

B. At National level

1. Policy makers should put guidelines on how to train and supervise TBAs so as to improve the referral system from TBAs to the health facilities

2. Further studies should be done on how to strengthen the referral system from TBAs to the health facilities

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