CROSS SECTIONAL SURVEY ON FACTORS CONTRIBUTING TO HOME DELIVERIES IN RUNGWE DISTRICT, TANZANIA.

AUTHOR'S NAME: **DR. ALLY SADIKI UREDI, MD (Havana- Cuba).**

DEPARTMENT/SCHOOL: **SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF THE WESTERN CAPE.**

DEGREE: **MASTERS IN PUBLIC HEALTH**

SUPERVISOR: **Prof. DEBRA JACKSON, RNC (Florida State), MPH (San Diego State), DSc (Boston).**

NOVEMBER 2009.

KEY WORDS:

Tanzania, Multiparous, Home delivery, Health facility delivery, Health services, Access to health services, Socio-economic factors, Cultural factors, Knowledge factors, Traditional birth attendants (TBAs).

ACKNOWLEDGEMENT.

The successful compilation of this research proposal was made possible by the joint efforts of a number of individuals that I would like to acknowledge with sincere gratitude for their very assistance.

I would like to thank my supervisor Prof. Debora Jackson; Dr. Seif J. Uledi, of Mbeya referral Hospital; Dr. Federick Mongi, (Obs. & Gyn. Specialist) from Medical assistance Training centre Mbeya; Mr. Mwandepa and Mr. Meleck, the regional health officers from Mbeya regional hospital, and Mrs. Kipitu from City Council Mbeya. Dr. Sungwa Ndagabwene, the Rungwe District medical officer. The late Dr. Simon Mshana of Iringa Institute of primary health care (PHC); and the late Dr. Uwiso from Rungwe District,

DECLARATION:

I understand what plagiarism is. This Thesis is my own work, and all sources of information have been acknowledged. I have taken care to cite/reference all sources as set out in the SOPH Academic Handbook.

TABLE OF CONTENTS PAGE

ABBREVIATIONS

ANC	ANTE NATAL CARE.
DMO	DISTRICT MEDICAL OFFICER.
EOC	EMERGENCY OBSTETRIC CARE
FGD	FOCUS GROUP DISCUSION
MDGs	MILLENNIUM DEVELOPMENT GOALS.
MMAM	MPANGO WA MAENDELEO WA AFYA YA MSINGI (Swahlihi version of PHSDP)
PHSDP	PRIMARY HEALTH SERVICE DEVELOPMENT PROGRAMME
RAWG	RESEARCH AND ANALYSIS WORKING GROUP
RMO	REGIONAL MEDICAL OFFICER
TBAs	TRADITIONAL BIRTH ATTENDANTS
TDHS	TANZANIA DEMOGRAPHIC HEALTH SURVEY.
UNPF	UNITED NATIONS POPULATION FUND.
WHO	WORLD HEALTH ORGANIZATION.

ABSTRACT

This is a cross sectional survey study that explored determinant factors contributing to home child delivery and influence of traditional birth attendances on place of delivery in Rungwe District, Tanzania.The study focussed on three main aspects namely factors (socio-economic, cultural and knowledge) that influence women to deliver at health facilities and those who deliver ta home. Reasons/factors associated with the acceptability of health services and influence of traditional birth attendaces on place of delivery and whether accessibility to health services and traditional birth attendants influence women to decide the place of delivery.

The study was descriptive cross-sectional in nature where a multistage random sampling procedure was used to select 8 wards and 16 villages. A systematic sampling was used to determine household interval in each village. Only one woman with at least one child was chosen in a household using a random sampling. In case of the absence of a woman with at least one child in a house falling in the interval, then the next house was considered. A total of 400 women with at least one child were selected at random from household cluster sample from all four divisions in Rungwe district. They were interviewed using semi-structured questionnaire. The participation rate was 100 % in both divisions. The age of the women ranged from 19-49 years with the mean age of 31 years (Std dev 7.5).

Data entry and analysis were done using the quantitative statistics with Epi Info 2002 software. Results were presented using descriptive statistics, figures and tables, and analytical statistics, using Student's t-test and chi-square.

A total of 400 women were interviewed, among them, it showed that there were good attendance for antenatal care 395 (98.75%) and only 5 (1.25%) did not attend antenatal care. However, 243 (60.8%) of women interviewed had incidence of home delivery and 157 (39.3%) had incidence of health facility delivery.

Home deliveries in a surveyed area are commonly assisted by unskilled persons, and consequently carry increased risks to the mother and to the new-born baby. Improvement of quality and accessibility of health care services by the health facility should involve harmonic balance between health service provider and beneficiaries in order to change the attitude towards minimizing the practice of home child delivery in Rungwe district, in Mbeya region, in Tanzania as awhole and elsewhere in the world.

.

KEY WORDS:

Tanzania, Multiparous, Home delivery, Health facility delivery, Health services, Access to health services, Socio-economic factors, Cultural factors, Knowledge factors, Traditional birth attendants (TBAs).

THESIS OUTLINE

BACKGROUND.

Various factors compel women to deliver at home, threatening their lives and that of their newborn babies. Studies show that health facilities in Africa are often inadequate and far apart. Pregnant women travel long distances to access such facilities where available. Facilities are often ill-equipped and manned by semi-skilled attendants who sometimes exhibit unprofessional conduct. Unaffordable costs of items that pregnant women must bring with them at the time of delivery, and traditional beliefs are also barriers to health facility delivery.

In Tanzania, women are encouraged to deliver in health facilities; however, the trend of home deliveries is still on the increase.

OBJECTIVE:

This cross sectional survey study aims to determine factors that contribute to home delivery and influence of traditional birth attendances on place of delivery in Rungwe district in Tanzania.

Specifically, the study objectives were:

- To examine the factors (socio-economic, cultural and knowledge) that influence women to deliver at health facilities and those who deliver at home.
- To assess whether the level of acceptability of the health services and Traditional Birth attendant influence women's choice on the place of delivery.
- To establish whether accessibility to health services and Traditional Birth attendant influence women to decide the place of delivery.

SETTING:

The study was conducted in Rungwe District –Mbeya Region of Tanzania.

METHODS:

The study was descriptive cross-sectional in nature. All the four divisions of the district were chosen for the research related to the four research objectives. The four divisions belong to Rungwe district in Mbeya region – Tanzania. Diverse socioeconomic situations are represented in all four divisions. Multistage random sampling procedure was used to select 8 wards and 16 villages. A systematic sampling was used to determine household interval in each village. Only one woman with at least one child was chosen in a household using a random sampling. In case of the absence of a woman with at least one child in a house falling in the interval, then the next house was considered. A total of 400 women with at least one child were selected at random from household cluster sample from all four divisions in Rungwe district. They were interviewed using semi-structured questionnaire. The participation rate was 100 % in both divisions. The age of the women ranged from 19-49 years with the mean age of 31 years (Std dev 7.5).

DATA COLLECTION, ANALYSIS AND PRESENTATION.

Data were collected using questionnaires. Data entry and analysis were done using the quantitative statistics with Epi Info 2002 software. Results were presented using descriptive statistics, figures and tables, and analytical statistics, using Student's t-test and chi-square. Recommendations are based on the findings of the study.

RESULTS:

In comparing the results across various sources of data in this study, similar and different facts came into view. A total of 400 women were interviewed, among them, it showed that there were good attendance for antenatal care 395 (98.75%) and only 5 (1.25%) did not attend antenatal care. However, 243 (60.8%) of women interviewed had incidence of home delivery and 157 (39.3%) had incidence of health facility delivery. Various socioeconomic and knowledge factors influenced the women's choice for place of delivery. Among the reasons that compel women to deliver at home were:

- Long distance to health facility (28.5%)
- Labour started suddenly (12.5%)
- Decision made by family (9.2%)
- Lack of money and transport (4.8%)
- Traditional birth attendants were nearer and conducted normal delivery services as well as nurses and they liked them and they were less expensive (3.5%)
- Nurses were uncooperative/offered unfriendly delivery services (0.2%)
- There were not medicines at health facilities (0.5%)
- They feared to be operated (0.2%)
- High cost for delivery services at health facilities.
- Family member's support.

Among reasons that influenced women to deliver at health facilities were:

- Good delivery service (58.4%)
- Short distance to health facilities (3.0%)

- Home delivery is poor/dangerous and unsafe (35.2%)

Among reasons that influenced the women to attend antenatal care clinics were:

- To know the progress of their pregnancies (77.0%).
- Short distance to clinics (38.9%).
- Family support (37.6%).
- To get advice/counseling/health education concerning their pregnancies (8.6%).
- To get treatment (7.8%).
- Easier in transport (7.6%).
- Fear from being neglected or chased by nurses at the time of delivery/labour (6.6).

Among the reasons/barriers for not going to antenatal care clinics

- To minimize frequency for attending antenatal care clinics (38.0%).
- They did not know that they were pregnant until they started to feel foetal movement (34.7%).
- Lack of transport (19.38%).
- Lack of money (16.46%).
- Long distance to clinics (14.1%).
- Bad treatment of health staffs (5.0%).

RECOMMENDATIONS/CONCLUSIONS

The findings from this thesis indicate that home deliveries are commonly assisted by unskilled persons, and consequently carry increased risks to the mother and to the new-born baby. Improvement of quality and accessibility of health care services by the health facility should involve harmonic balance between health service provider

and beneficiaries in order to change the attitude towards minimizing the practice of home child delivery in Rungwe district, in Mbeya region, in Tanzania as awhole and elsewhere in the world.

CHAPTER 1. Introduction

1.1 Background

Globally, delivery of women at home continues to be a major problem in developing countries. Ackermann-Liebrich U, Vogeli T, Gunter-Witt K (1996), Sorensen et al (2000), W Wagle RR, Sabroe S & Nielsen BB (2004) agle RR, Sabroe S & Nielsen BB (2004) & Walraven et al (1995) found that although the debate about safety and women's right to choose between home or hospital delivery continues in the developed world, an undesirable outcome of home delivery has been documented in developing countries. Also, United Nations Population Fund (1999) points out that women in the developing world are more likely to deliver at home than in medical facilities. The range across countries is wide, from 10% or fewer in Bangladesh, Cambodia, and Nepal to 62% in Vietnam. In sub-Saharan Africa, an estimated 40-50% of women deliver at home. Home deliveries place women and newborns at risk. Ganer P., Lai D & Baea M (1994) reported a high rate of obstetric complications among apparently normal pregnancies delivering at home in Papua New Guinea.

According to National Bureau of Statistics & Macro International Inc (2005) and Tanzania Demographic and Health Survey (2004-2005), in Tanzania it is estimated that 53% of women deliver away from health facilities despite high coverage of antenatal care (ANC) which is estimated to be 94%, and only 47% of birth occurs at health facilities. In addition, of all deliveries occurring in health facilities, only 46% were attended by skilled attendants. Walraven et al (1995) documented that home birth without a trained attendant resulted in a three times higher perinatal mortality than those in a health facility with trained attendants in rural Tanzania.

According to Primary Health Services development Programme PHSDP – MMAM 2007-2017 (May, 2007) generally the quality of health services in Tanzania, despite remarkable improvement over the years of health sector reforms in the early 1990s, is still unsatisfactory. The performance of the health sector has been negatively affected by limited resources which have led to an unsatisfactory quality of health care provision at all levels.

Under funding of the health sector has undermined the health infrastructure across the country. The inputs to the sector in terms of equipment, supplies, transport and communication remain insufficient.

As regards maternal health, data from the Tanzania Demographic and Health Survey (TDHS) (2004-2005) show that pregnancy related mortality has not improved over the last two decades. The maternal mortality ratio for the period 1995 to 2004 was 578 deaths per 100,000 lives births, not significantly different from the 1987 to 1996 ratio of 529 per 100,000 live births. Also the data show that for the 1990s there were steady declines of births taking place in a health facility, the decline was from 53% in 1991, to 44% in 1999, with a slight improvement thereafter. By 2004, facility-based deliveries had reverted to 1996 levels of 47%. Over 80% of the maternal deaths are due to direct causes that include obstetric, haemorrhage, obstructed labour, pregnancy induced hypertension, sepsis and abortion complications.

The majority of maternal deaths can be prevented if pregnant women can be assured improved maternal health care such as of access to quality health care with skilled attendant at childbirth and especially to emergency obstetric care services when pregnancy related complications arise.

Major barriers to access delivery health services include long distance to a health facility, lack of transport and unfriendly services. The high rates of home deliveries

are also attributed to poor geographical access to health facility, lack of a functioning referral system, inadequate capacity at health facilities in terms of space, skilled attendants, equipment and other socio-cultural aspects surrounding the pregnant women. Additional factors include gender inequalities in decision-making and access to resources at household level. (PHSDP – MMAM 2007-2017 May, 2007)

Furthermore, the referral system has serious challenges including limited number of ambulances; unreliable logistics and communication system; and low community based facilitated referral system. ACCESS (2004) explained that access to essential referral care is perhaps the single most prominent barrier the health care for the poor; in addition to direct health care costs, those associated with transport and subsistence are prohibitive.

Primary Health Services Development Programme PHSDP – MMAM 2007-2017 (May, 2007) explains that in Tanzania currently there are 2,555 wards and 10,342 villages. Also, there are health facilities for both public and private which include 4,679 dispensaries, 481 health centres, and 219 hospitals distributed throughout the country.

The dispensaries and health centres that are at a centre of primary health care facilities were planned to serve an average population of 10,000 and 50,000 respectively. However, there are 5,162 villages without dispensaries.

This is simply because of the increasing population and slow pace/stagnation of construction of primary health facilities. The average population served by each dispensary and health centre is more than the planned population, overstretching the effective functioning of the current primary health care facilities. Also the problem is compounded with shortage of staff, inadequate medical equipment and other supplies.

The geographic accessibility of the current primary health facilities is reported to be at about 90% of people living within five kilometres. Nevertheless, there is great variation among districts. Besides, land terrain and lack of reliable transport poses a great danger to expecting mothers and very sick patients needing access health services. These factors influence accessibility of primary health services PHSDP – MMAM 2007-2017 (May, 2007)

On regard to health workers, Mliga, Mwakilasa & Mwakalukwa (2005) point out that the most pressing problems facing the health system in Tanzania are a lack of health personnel, sufficiently trained and appropriately deployed, and poor health worker performance.

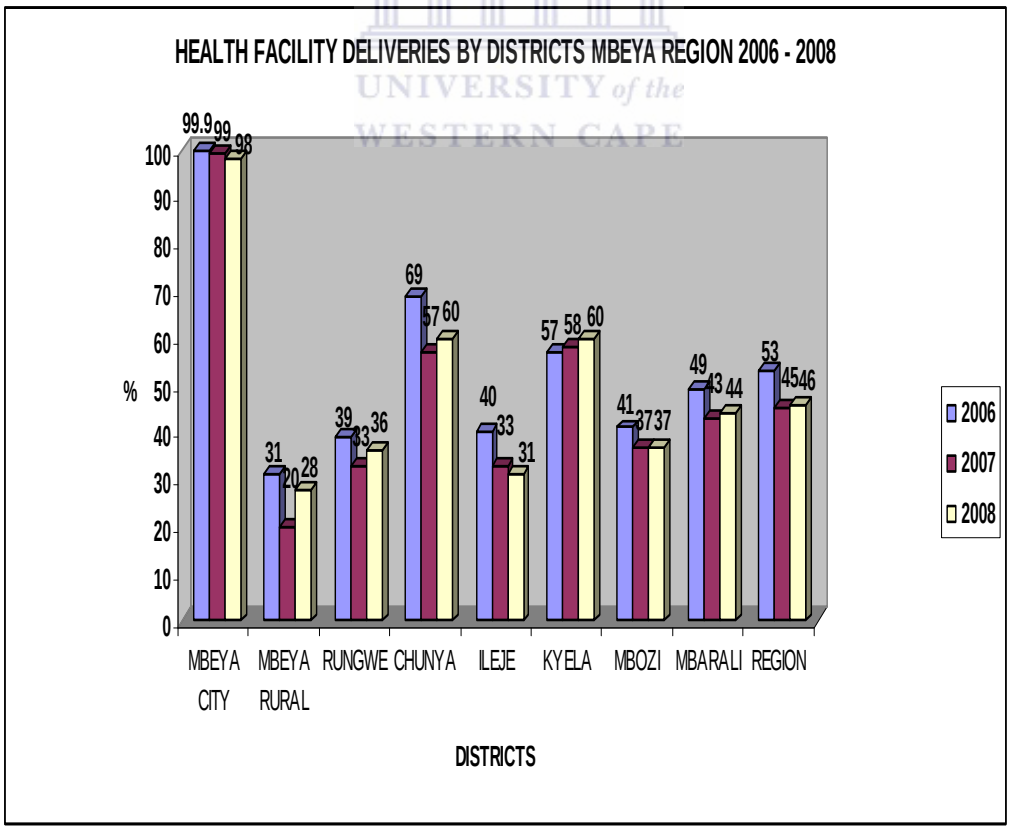
Also, a case study done by Kurowski et al (2003) showed that the total number of active health workers in 2001/02 was estimated at 54,200, with unskilled workers forming the largest group (31%), followed by the professional group of nurses and midwives (24%). Between 1994/5 and 2001/02, the number of active health workers per 100,000 population decreased by 35% from observed 294.4 to an estimated 162.1 per 100,000 populations. Shortage of health staff is even more acute when differentiated by cadres, with significant deficits among skilled health professionals. The estimated ratios of currently active professionals per 100,000 populations are 38.9 for nurses, 2.5 for physicians and 25.3 for other medical cadres (i.e. medical officers, assistant medical officers and clinical officers). Kurowski et al (2003) continue to explain that deployment of available health workers is highly imbalanced. Overall, 65% of the 54,200 health workers in 2002 were located in public sector, 22% in private not-for-profit and 14% in private-for-profit. Roughly 84% of health workers, mainly constituting low skilled cadres, and were employed in the rural areas. Research and Analysis Working Group (RAWG) (2005) noted that the 16% who are

employed in urban areas represent a disproportionate level of high skilled cadres. Even after corrections for infrastructure, regional variation in staff per population remains significant, and the disparities are even greater at the district level. According to Olsen OE, Ndeki S, and Northeim O F (2005) these disparities are also confirmed by findings of recent facility-based survey of the current status of human resource quality, availability and distribution in six districts of northern Tanzania. Kurowski et al (2003) and Mliga, mwakilasa & Mwakalukwa (2005) point out that the barriers to improving the human resource situation are many and imposing, in particular for highly skilled workers in the public sector who are overburdened, poorly paid and working under conditions that are demoralizing. Poor health worker motivation and performance is commonly manifested in many of the documented issues faced by patients: lack of courtesy to patients, illegitimate charging for drugs and equipment, high levels of absenteeism, "dual practice", and poor task performance such as failure to conduct proper patient examinations. These problems among health staff not only negatively affect quality of care, but also reduce the utilisation of health services and ultimately impact negatively on health outcome.

In addition, Research and Analysis Working Group (RAWG) (2004), point out that altogether, many poor women in rural areas fail to access quality primary care when they need it most, and many more fail to obtain the necessary referral for more skilled care. There appears to be absolute shortage of resources at the primary health facility level, which in turn impacts negatively on the quality of care delivered.

To solve these problems, Emergency obstetric care (EOC) needs to be improved, and access to antenatal care and delivery facilitated, including improved referral services, especially for poor and rural women.

Like elsewhere in Tanzania, in Rungwe district statistics shows that there is high incidence of home delivery which ranges from 13.3% to 62%, (Rungwe District Medical Officer's five year report, 2000-2004) and in addition, from the recent Regional medical officer's three years report (2006-2008), in Mbeya region statistics show that there is very low incidence of health facilities delivery with an average range of 53% to 46% i.e.2006 (53%), 2007 (45%) and 2008 (46%) (Mbeya region medical officer's three year report, 2006-2008) as well as by district in Rungwe district range from 33% to 39% i.e. 2006 (39%), 2007(33%) and 2008(36%) (Mbeya Region Medical officer's three year report 2006-2008) contrary with an exception to Mbeya Urban/City which show high incidence of health facility delivery which range from 99.9% to 98% i.e. 2006(99.9%), 2007(99%) and 2008(98%) (Mbeya region Medical officer's three year report 2006 – 2008).



Source: Mbeya Region Medical officer's three year report (2006-2008)

Figure 1: Health facilities Deliveries by Districts Mbeya region (2006-2008)

As to what determines the preference of home over health facility delivery was a question of crucial importance to this study.

It is worthwhile noting that determinants of such preference might differ in different populations depending on local circumstances as mentioned before and therefore the need to identify local factors in favour of home delivery than health facility delivery is crucially important.

This study aim at determining factors contributing to home delivery and influence of traditional birth attendances on place of delivery in Rungwe District, Tanzania.

The outcome of the study may contribute to efforts to reduce neonatal and maternal mortality by promoting utilization of health facilities by pregnant women in accordance with Millennium Development Goals aimed at reducing maternal mortality by three-quarter by year 2015.

1.2. Problem Statement

Home delivery is one of the major problems in family health services in Rungwe District. Data available in the district reveals that a majority of women do not deliver at the health facility. The district medical officer's five years report from year 2000 to 2004 shows a declining number of women who deliver at the health facility, 2000 (86.7%), 2001 (62.0%), 2002 (72%), 2003 (38.0%) and 2004 (47.0%).

Reasons for preference to deliver away from health facilities are not well established. However, long distances to health facilities, doubtful skills of the attendants and sometimes, lack of professional etiquette (language), inadequate and obsolete equipment, and superstitious beliefs might be some of the limiting factors amongst

others. Other factors could be costs for items that pregnant women must bring with them at the time of delivery and age of the attendants in health facilities. It is true that health facilities are below standard, but still they are a better option for child delivery than elsewhere. Health facilities can recognize and prevent medical crises in case of complications. Assistance by untrained attendants carries greater risks for both the mothers and the newborn babies.

This study aim at determining factors contributing to home delivery and influence of traditional birth attendances on place of delivery in Rungwe District, Tanzania.

1.3 Rationale of the Study

Health reports in Rungwe District indicate an increasing reluctance by expectant mothers (pregnant women) to attend health facilities, yet, the negative effects of this attitude are clearly felt in the community. Most women and newborn babies, who die from childbirth complications, die in private homes, without professional assistance, during and after deliveries. Also, mothers and their newborn babies can get infections if they deliver at home under un-sterile conditions.

Other complications, such as ruptured uterus, severe haemorrhage during and after delivery, etc may lead to maternal death. In addition, in the district, there is no recorded report of any study ever done to determine factors that compel women to deliver at home. Further more, premature death among women has an impact on the mother, the newborn, family and the nation at large. Information obtained by this study is crucial for planning interventions that will enhance and promote delivery in health facilities. Preliminary discussions with community leaders revealed that there was a need for this study, and there was an agreement for collaboration and cooperation.

CHAPTER 2: Literature Review

2.1 Home delivery in the developing world

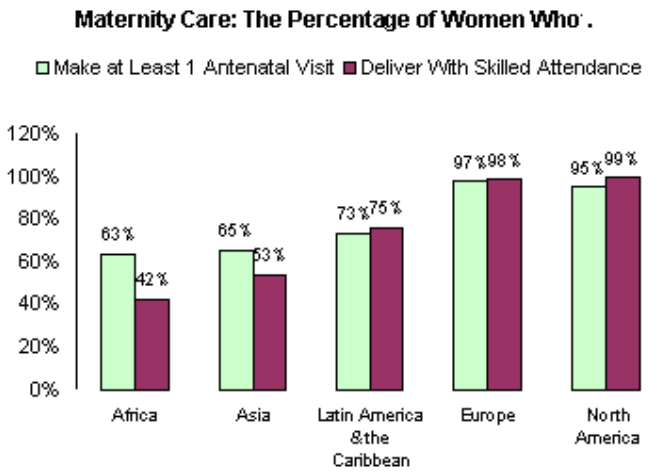
Home delivery is a problem in most of the developing countries.

Nirupan and Yuster (1995) and Barnes-Josiah et al (1998) pointed out that various studies have found that access to essential obstetric services is limited in developing countries. According to Abouzahr C. (1997) millions of women do not have access to good quality health services during pregnancy and childbirth – especially women who are poor, uneducated or who live in rural areas. Less than half of women in developing countries get adequate health care during and soon after childbirth, despite the fact that most maternal deaths take place during these periods. In contrast, use of maternal health services is nearly universal in developed countries Abouzahr C (1997).

Access means that services are available and within reach of women who need them. Good quality services require that health care providers have adequate clinical skills and are sensitive to women's needs; that facilities have necessary equipment and supplies; and that referral systems function well enough to ensure that women with complications get essential treatment.

2.2 Many Women Lack Maternal Health Care

According to WHO (1997) at least 35% of women in developing countries receive no antenatal care during pregnancy, almost 50% give birth without a skilled attendant and 70% receive no postpartum care in the six weeks following delivery. This lack of care is most life-threatening during, childbirth and the days immediately after delivery, since these are the times when sudden, life-threatening complications are most likely to arise.



Source: Abouzahr C (1997)

Figure 2. Maternity Care: The Percentage of Women

Most women in North America, Europe and Latin America & the Caribbean make at least one antenatal visit and deliver with skilled attendant while in Africa and Asia less than half deliver with skilled attendant

2.3 Why women do not use available services?

Accoring to Abouzahr C (1997), among the reasons it found that **No physical access**: Most rural women (80%) live more than five kilometres from the nearest hospital. Vehicle shortages and poor road conditions mean that walking is often the main mode of transportation, even for women in labour. In addition, Biego G. et al (1995) point out that in rural Tanzania, 84% of women who gave birth at home intended to deliver at a health facility, but could not because of distance and the lack of transport.

High costs: Even when formal fees are low or non-existent, women often face expenses for transport, drugs, and food or lodging for the women or her family members.

Table 1: Impact of user fees on obstetric admissions, Zaria, Nigeria			
	Obstetric services free (1983)	Fees for some services introduced (1985)	Increases in fees (1988)
Obstetric admissions	7,450	5.437	3,376
Deliveries	6,535	4,377	2,991
Maternal deaths	2	1	62

Source: Abouzahr C. (1997).

Poor information: Women and community members often do not know how to recognise, prevent or treat pregnancy complications, or when and where to seek medical help. Odoi-Agyarko H., Dollimore N., Owusu-Argyei O., (1993) explain that in Ghana, 64% of women who died of pregnancy complications sought help from a traditional healer before going to a health facility. Families cited cost and their belief that the woman was not ill enough as the main reasons for not seeking hospital care.

Cultural preferences: Formal health services can conflict with ideas about what is normal and acceptable including preferences for privacy, modesty and female attendants. Leslie J. and Gupta G. R. (1989) explain that the Saraguro Indians in Ecuador turn away from affordable, accessible maternity care because they feel that hospitals violate women's privacy during childbirth and because many health providers are men.

Lack of decision-making power: In many parts of the world, women's power to make decisions is limited, even over matters directly related to their own health. Safe motherhood (1997) point out that in Bangladesh, it is usually the mother-in-law and husband who make the decision to seek (or not seek) care. They are often the least likely to know about pregnancy-related complications and their possible fatal consequences.

Health services are inadequate: Thaddeus and Maine (1994) explain that poor quality of care is one of the most common reasons women give for choosing not to use available maternal health services. Problems include that health facilities in developing countries face chronic shortages of equipment, drugs and basic supplies, including blood for transfusion. Families of women in labour may be forced to purchase drugs and supplies to bring to the hospital, which can cause fatal delays.

Also, Abouzahr C. et al (1996) adds that health facility staffs are often poorly trained. They may lack essential clinical skills, and may not observe hygienic practices. Health workers may be rude, unsympathetic and uncaring, so women prefer to use the services of traditional birth attendants and healers.

Other factors include: a lack of privacy; run-down physical facilities; inconvenient operating hours; and restrictions on who can stay with a woman at the health facility. Furthermore, Fawcus S. et al (1996) explain that delays in referring women from community health facilities to hospitals are one of the most important barriers to life-saving maternal care**.** A study of 718 maternal deaths in Egypt found that 92% of them could have been avoided if good quality care had been provided Abouzahr C. et al (1996).

Furthermore, according to Brieger, Luchok, Eng, & Earp (1994), Hoque & Selwyn (1996), O'Mahoney & Steinberg (1995), Save the Children (2003) and WHO (1996)

around 80% of pregnant women on African continent attend antenatal care (ANC) on a regular basis, whereas only on average 45% (6%-86%) seek skilled assistance during childbirth. But, Hodgkin (1996), Van den Heuvel, De Mey, Buddingh, & Bots, (1996) add that various barriers are perceived to prevent women in low-income countries from seeking skilled care during labour, including midwives' attitudes, lack of confidence in services offered, socioeconomic conditions, as well as cultural beliefs and traditions.

In Sub-Saharan Africa, an estimated 40-50 % of women deliver at home (United Nations Population Fund UNPFA, 1999). This places women and newborns at risk. Ganer et al. (1994) reported a high rate of obstetric complications among apparently normal pregnancies delivering at home in Papua New Guinea.

The highest maternal mortality rates are found in Sub-Saharan Africa, where the WHO estimates that less than 50% of women have access to skilled attendants, and only 36% give birth in health facilities (WHO, 1997). Furthemore, Patricia B. M. et al (1994) explained that according to surveys done in 37 countries during the 1990's the average percentage of women who delivered without skilled assistance remained reasonably large.

A study done in Zimbabwe reported a high attendance to ANC clinics with a majority of women (56%) delivering their children outside health facilities. Only 44% of ANC clinic attendants delivered in a formal health care unit. Over the years, scholars from various parts of the world have attempted to find out why women, especially those in developing countries, seem to avoid using health facilities for delivery.

In a cohort study, Hodgkin (1996) cited distance to facilities, and family's economy, as factors that militate against women seeking services in health centres. Abouzahr (1997) cited in Family Care International (1998) stated that poor and uneducated or

rural women lack access to good quality health services during pregnancy and childbirth. He defined access as availability of services within reach of those who need them, and good quality services as entailing health attendants with adequate clinical skills, and who show concern for women's needs, availability of equipment and supplies in facilities, and efficient referral systems.

The author pointed out that most rural women live far from hospitals, and means of transportation when available, is often inadequate. Odoi-Agyarko H., Dollimore N., and Owusu-Argyei O.(1993) cited in Family Care International (1998) highlighted other constraints like the high costs associated with attending health facilities, poor information on pregnancy complications, and how and where to get medical help. Opuko et al (1997) pointed out that health facilities may also be shunned because they are poorly equipped and their services are mediocre.

Walker et al (2000) established that despite of high maternal mortality rate most women preferred to deliver at home because the services and conditions in public facilities were poor. Thaddeus & Maine (1994) cited in Family Care International (1998) reported poor and inadequate services, with inadequate equipment and basic supplies, and poorly trained attendants who often exhibit unprofessional conduct. Gilson (1997), Nahar and Costello (1998) raised the issue of health workers demanding payment from their clients, and contend that such practice discourages the women from using the health facilities.

A survey conducted in Malawi, Godfrey (1996) indicated that although many women attended antenatal clinics, only 23% of them delivered in the clinics. Kaguna et al (2000) discovered that in Rakai District of Uganda, 32% of the sampled population used public health facilities, while 44% delivered at home, and 17% were attended by traditional birth attendants. The reasons being the unprofessional ways of health

attendants, and social influences. Other scholars add that influence of traditional birth attendants also discourage the use of health care facilities Chipfakacha V. (1994).

Okojie (1994) pointed out that other factors forcing women not to use health facilities, like gender inequalities entailing restrictions on their movements and seclusion. Leslie (1989) cited in Family Care International (1998), adds to the list factors of cultural preference, when women may avoid using health facilities because the services there seem to conflict with their cultural norms. The ENMMS (2000) cited in Clean and Safe Mother Birth (2005) established that Egypt has a home delivery rate of over 50%, with 29% of maternal and 75% of neonatal deaths occurring at home. Reasons for choosing home delivery are local traditions, customs, greater comforts, and privacy and trust in traditional birth attendants.

Furthermore concerning factors that compel women to deliver at home rather than at health facilities, Brieger et al (1994) found that factors such as absence of doctors especially at night, bureaucracy, and disorganized referral systems discourage women to deliver at health care facilities. They pointed out that in Nigeria for instance, that despite adequate local provision of maternity services, 65% of women still delivered at home. The authors pointed out that this was mainly because of fees for delivery services, level of income, cultural beliefs and education.

McCord and Chowdhury (2003) explains that a study in rural India found that patients have learned to determine when hospital care is needed, resulting in the effective and efficient delivery of emergency obstetric services. The cost of these services, while low on a per-capita basis, is a substantial barrier for many poor families. And Borghi et al (2003) too explains that cost of services is also a barrier to use of hospital-based delivery care in West Africa.

Ensor T. (2004), Raghupath S. (1996) and Hodgkin D. (1996) point out that distance is known to negatively impact service utilisation and is also cited as a reason why women choose to deliver at home rather than in a health facility. Given the cultural context, the remarkable effect of distance on use of facility-based care is not surprising.

Other study done in Ghana by Afful (2007) showed that ignorance due to observation of various traditions and taboos, belief that God or the fetus decides place of delivery, lack of knowledge of estimated date of delivery, poverty, poor health staff attitude, unavailable means and cost of transport, cost of health care as well socio-cultural beliefs on delivery were the outstanding constraints to utilization of health care facilities in the district.

Also, Adapesa (2007) in Ghana identified similar factors such as lack of transport and high cost of transport, poverty, low awareness about the benefits of facility delivery, poor health worker attitude and influence from family members. Some demographic characteristics which were prominent were mother's education, occupation and parity. The results from the quantitative data show that 93% of the women attended antenatal clinic with 61% of them delivering at the health facility.

Furthermore, as reasons for decision making, Bolam et al (1998) explain that in Nepal, maternal education was among the important independent factors in determining the place of delivery. Also, Yanagisawa et al (2006) documented that woman who had at least 7 years of school attendance being six times more likely to deliver babies at a health facility than those who did not attend.

Also according to Lazarus and Folkman (1984) awareness of obstetric complications and possible consequences thereof, as well as, knowledge of modern technology is an active coping strategy that assists the individual to make correct decisions. Toan

(2001) emphasizes the importance of education, as it increases women's power of decision and consequently their use of available services.

On another hand, the use of abusive language and lack of tolerance by the health workers were felt to be discouraging the use of health facilities for delivery. Similar experiences have been documented by D'Ambruoso et al (2005) for instance in Ghana, where women changed their place of delivery, and recommended the same to others when they experience degrading and unacceptable behaviour. Hence, staff attitudes were an important component in deciding where to deliver.

Hodnett et al (2002) and Roosmalen et al. (2005) have shown that continuous supportive care during childbirth, especially when the caregiver is not a member of the hospital staff, improves the outcome of labour. However, Roosmalen et al. (2005) has shown that in many of the delivery rooms of health facilities in sub-Saharan Africa and Asia, women in labour are generally not allowed to bring a relative with them into the labour ward. Samizi G. (1997) explain that among factors which keep women away from utilizing health facilities are cost of hospital delivery, unfamiliar practices and inappropriate restrictions of family members by health staff when mothers are admitted to a health care unit.

Thind A. et al (2004) added that other factors include: bureaucracy, lack of drugs and other supplies, non-functioning equipment, absence of doctors especially at night, unfriendly attitude of health staff towards patients and negative perceptions of the quality of care provider against cost. According to Walker D. et al (2002) in a study done in Kalimantan Indonesia, preference of home delivery among pregnant women was attributed to poor quality of care in the health facility and contributed significantly to excessive maternal mortality. The situation is worsened by disorganized referral system.

In addition to the above, Fantahum M. (1995) explains that accessibility of antenatal care services which include uneven distribution of health facilities, cost of transportation, bad condition of roads and travel time from home to a health facility due to long distance have been shown to be important barriers to seeking health care, particularly in rural areas.

Furthermore, WHO (1986) points out that social economic and cultural factor has significant influences on the choice of place of delivery. Poverty is considered by WHO as a high risk factor. It is known that poor women are less likely to have formal education than wealthy women, and are less likely to be in good health and to seek or receive medical care.

2.4 Programmes to Address Home Delivery

On how to solve this problem? Maine et al (1996) and Figa-Talamanca (1996) pointed out that building a functional chain of referral to obstetric services can increase access to essential obstetric services.

Furthermore, WHO (1996) added that one such system is provided by maternity waiting homes that are linked to facilities offering essential obstetric care. Women who are at increased obstetric risk, but who do not have access to essential obstetric services, are referred to maternity waiting homes a few weeks prior to delivery. Once a woman is in labour or in need of care, she is transferred to the hospital. Furthermore, Gill and Ahmed (2004), Djan et al (1997), Ifenne et al (1997), Leigh et al (1997), Mbaruku and Bergstrom (1995) state that improving the quality of care at referral facilities can increase the use of essential obstetrical services and reduced case fatality rates.

Abreu and Potter (2001) pointed out that this includes low-cost improvements in the design and functioning of operating rooms. Also, Mavalankar (2002) added that training to improve essential obstetric care skills of providers is a key to providing quality obstetric care. Changing policies to enable existing medical staff to address obstetric emergencies may also increase the use of essential obstetrical services and reduce mortality in rural areas. Furthermore, Gohhou et al (204), Stekelenburg and Roosmalen (2002) explained that maternal mortality/morbidity review meetings, where each case of maternal death and/or severe obstetric morbidity and contributing factors are discussed among health facilities/hospital staff, can be useful tools for identifying problems and improving essential obstetric care services at the district level. Filippi et al (2003), Weeks et al (2003) and Wagaarachchi et al (2001) explained that criterion-based clinical audits can also be useful tools for measuring and improving the quality of obstetric care in developing countries.

According to Ray and Salihu (2004), Minden and Levitt (1996), Bolam et al (1999) the role of traditional midwives (TBAs)—medically unskilled birth attendants—in improving maternal health has been studied in many communities. Furthermore, Goldman and Glei (2003), Goodburn et al (2000), Hoff (1997) and Kamal (1998) point out that researchers have examined the impact of training on TBAs' obstetric knowledge and practices, as well as on maternal mortality and morbidity.

Bergstrom and Goodburn (2001) explain that the impact of training TBAs on maternal mortality appears limited and the greatest benefit may be improved referral and linkages with the formal health system. According to Sibley, Sipe and Koblinsky (2004) results from a meta-analysis suggest TBA training may increase antenatal attendance rates. But, Maimbolwa et al (2003) explain that in Zambia, traditional birth assistants serve as culturally knowledgeable, social support for women during labour

and delivery, but have little accurate knowledge of appropriate management of labour and delivery.

Paul and Rumsey (2002) explain that a study in rural Bangladesh suggests that improving the timely referral of complicated deliveries to medical facilities or to train TBAs could increase the utilization of health facilities and reduce maternal morbidity and mortality. Also, Bultreys et al (2002) point out that with appropriate training and supervision, TBAs may be helpful in preventing transmission of HIV. Hodnett et al (2004) add that continuous one-to-one support of women during labour has been shown to improve satisfaction and outcome.

2.5 ANC and Home delivery in Tanzania

In Tanzania, women are encouraged to deliver in health facilities. However, according to National Bureau of Statistics & Macro International Inc (2005), and the Tanzania Demographic and Health Survey (2004-2005) only 47% of women deliver in a health facilities and 53% deliver at home. Of all deliveries occurring in health facilities, only 46% are attended by skilled attendants.

Family Care International (1998) shows that 84% of rural women in Tanzania, who intended to deliver at health facilities, were unable to do so because of distance and transportation problems. Different studies have been conducted to identify both the causes and effects of this problem.

In addition, National Bureau of Statistics & Macro International Inc. (2005) show that in Tanzania, although health facilities are closer to rural households than in many African countries, more than half of children are delivered at home despite a high coverage (94%) of antenatal care (ANC).

In Tanzania it is recommended that a pregnant woman attend antenatal clinic for a minimum of four visits before delivery even if she does not have any pregnancy related problems. At the clinic, health education is given as part of the antenatal care package.

Moreover, Tanzania National Bureau of Statistics and Macro International Inc. (2000) point out that despite high levels of access to antenatal care, trained medical personnel attend only 44% of births.

Also, Otim-Adoi (1981), Hitimana-Lukanika (1988), Munaaba (1995), Amooti-Kaguna & Nuwaha (2000), National Bureau of Statistics & Macro International Inc.(2005) & Lugina et al (2004) point out that most previous studies in Tanzania and elsewhere have shown that most mothers attend antenatal clinics at least once during pregnancy, but that only a small proportion of them deliver in health facilities.

Elo (1992), Nwakoby (1994), Bolam et al (1998) and Yanagisawa et al (2006) explain that socioeconomic variables and physical distance from health facility influence the place of delivery. Also, Bicego et al (1995) point out that in rural Tanzania for instance, 84% of women who gave birth at home intended to deliver at health facilities but did not because of distance and transportation problems.

Amos (2004) in his community-based descriptive cross-sectional study in Karagwe District, Tanzania, where focus group discussion (FGDs) and cross-sectional data collection methods were used, showed that the utilization of antenatal care services was very high. However, health facility deliveries were unacceptably low.

Furthermore, as regards to maternal health, data from the Tanzania Demographic and Health Survey (TDHS) (2004-2005) show that pregnancy related mortality has not improved over the last two decades. The maternal mortality ratio for the period 1995

to 2004 was 578 deaths per 100,000 lives births, not significantly different from the 1987 to 1996 ratio of 529 per 100,000 live births.

Also the data show that for the 1990s there were a steady decline of births taking place in a health facility, as mentioned above, the declines were from 53% in 1991, to 44% in 1999, with a slight improvement thereafter. By 2004, facility-based deliveries had reverted to 1996 levels of 47%. Over 80% of the maternal deaths are due to direct causes that includes obstetric, haemorrhages, obstructed labour, pregnancy induced hypertension, sepsis and abortion complications.

In addition, Walraven et al (1995) documented that home birth without a trained attendant resulted in a three times higher perinatal mortality than those in a health facility with trained attendants in rural Tanzania.

Like findings of other developing countries and in Tanzania as a whole, also in Rungwe district, the Rungwe district medical officer report (2000-2004) shows that health facility deliveries were equally unsatisfactory, only 38.8% to 48% of women deliver in a health facilities. In addition, from the recent Mbeya Regional medical officer's three year report (2006-2008), statistics show that there is very low incidence of health facilities delivery with an average range of 53% to 46% i.e.2006 (53%), 2007 (45%) and 2008 (46%) (Mbeya region medical officer's three year report, 2006-2008) as well as by district in Rungwe district range from 33% to 39% i.e. 2006 (39%), 2007(33%) and 2008(36%) (Mbeya Region Medical officer's three year report 2006-2008) contrary with an exception to Mbeya Urban/City which show high incidence of health facility delivery which range from 99.9% to 98% i.e. 2006(99.9%), 2007(99%) and 2008(98%) (Mbeya region Medical officer's three year report 2006 – 2008). As previously cited in Chapter 1 Figure 1 page 6.

2.6 Conclusion

From this cross sectional survey study findings it can be concluded that socioeconomic, cultural, knowledge, inaccessbility to health facilities, poor health services at health facilities, presence of traditional birth attendants, lack of women decision-making power are among the factors that play a great role in determining whether women use health facilities or not and where they deliver.

2.7 Aim and Objectives

2.7.1 Study Aim

The aim of this cross sectional survey study is to determine factors contributing to home delivery and influence of traditional birth attendances on place of delivery in Rungwe District Tanzania

2.7.2 Research Question

What are the factors contributing to home delivery in Rungwe District?

2.7.3 Specific Objectives

1. To examine the socioeconomic, cultural, and knowledge factors that influence women to deliver at health facility and those who deliver at home.
2. To assess whether the level of acceptability of the health services and traditional birth attendants influence women's choice on the place of delivery.
3. To find out whether accessibility to health services and traditional birth attendants influence women to decide the place of delivery.

CHAPTER THREE: METHODOLOGY

3.1 Study setting

The Tanzania mainland is located in eastern part of Africa, and is divided into 21 administrative regions which are further subdivided into 114 districts with 133 councils**.**

Mbeya region is located on the South-Western high land zone of Tanzania. Bordering Malawi and Zambia on the southern part of the region, Rukwa region on the western, Iringa region on the eastern, and Tabora and Singida regions on the north, it is situated at an elevated land between 400-1700 metres above sea level.

Currently Mbeya region has a total of eight district councils within 7 districts, 25 divisions, 174 wards and 992 villages.

The region's population is 2,330,665 with an urbanization growth rate of 14%. It has population density of 37 people per square kilometre.

The health service infrastructure has 17 hospitals, 30 health centres and 318 dispensaries.

This study was conducted in Rungwe District, Mbeya region. Rungwe is one of the eight districts in Mbeya region of Tanzania.

Rungwe District lies between 08^0–09^0 South of the Equator, and 33^0-34^0 East of Greenwich. The district shares borders with Kyela District in the south, Makete District (Iringa Region) in the east, Ileje District in the west, and Mbeya District in the north. The Rungwe District headquarters is situated at Tukuyu town along Mbeya-Malawi Highway, 72Km. away from Mbeya city.

The District has four (4) administrative divisions namely:

i.) Tukuyu,

ii.) Ukukwe,

iii.) Pakati and

iv.) Busokelo.

Divisions are headed by divisional secretaries and are subdivided into wards and wards into villages. Wards and Villages are normally administered by Executive Officers. A set of ten houses (ten cells) consisting of ten household leadership is the smallest unit of government's village administrative hierarchy (grass root government unit). The District has 30 wards, 162 registered villages and 731 sub villages.

The district has an area of 2,811km^2 which is 4% of the region. It has a total population of 411,577 people according to the National Population and Household Census carried out in 2002. The population grows at a rate of 0.9% and it has a population density of 115 people per square kilometre. The number of women within the childbearing age is approximated to be 62,953. Rungwe District has about 100,385 households, with an average household size of four (4) members.

Health facilities are unevenly distributed with 3 hospitals, 5 health centres and 55 dispensaries.

3.2 Study Design.

The study used a descriptive and analytical cross-sectional survey.

Descriptive studies: Descriptive studies concern simple descriptions of the health status of a community, based on routinely available data, or on data obtained in special surveys. They are limited to descriptions of occurrences of diseases in

communities, and do not show any relationship between exposures and effects Varkevisser, et al. (1991)

Analytical studies: Analytical studies go further by analysing relationships between health status and other variables (Beaglehole et al, 1997).

Beaglehole et al (1997) quoted in Flinders University Module guide (2006) asserted that "Descriptive studies will establish the size and distribution of the problem, and should be relatively easy to do within short space of time and will be relatively inexpensive. However, it is difficult to identify causal risk factors that could assist in designing an intervention. Analytical studies allow the identification of associated risk factors between health status and other variables, but they will not evaluate the effectiveness of any interventions that have been formulated".

Cross-sectional studies: Cross-sectional studies, also known as prevalence studies, aim to determine the frequency of disease. They are relatively easy and cheap to conduct, but useful for investigating traits of individuals. They also help in establishing the health care needs of communities. But it is difficult to establish the reasons for the associations shown in cross-sectional studies (Beaglehole et al, 1997).

3.3 Study (Target) Population

This study was conducted in Rungwe District Tanzania. The study population consisted of women aged between 19years and 49years have at least one child. According to TDHS 2004–05, it found that about 52 percent of women aged 19 years were already have one child or a pregnant for the first time in Tanzania

3.4 Selection Criteria for Study Population

Participants (women) for this study were those who had given birth to at least one child in Rungwe District as it found in TDHS 2004–05, and have resided in the district for a period of not less than one year.

3.5 Sample size

A sample is a small-scale representation- a kind of miniature model-of population from which it is selected. Varkevisser (1991) stated that for quantitative studies, calculations can be made to determine the optimum sample size.

In this study, the sample size was determined by a formula $n= P (100-P)/e^2$

Where n = desired sample size

P = estimated prevalence of attribute under study

e^2 = level of error accepted (Varkevisser, 1991)

Whereby P =53% as a prevalence of home deliveries, e =2.5 that is error accepted. Thus the sample size was 398.5≈400

3.6 Sampling Procedure

The entire four divisions of Rungwe District were included in the study. Multistage random sampling was applied. This is a procedure that is carried out in phases, and usually involves more than one sampling method. Random sampling was used to obtain wards according to specific division. Katzenellenbogen et al (1997) stated that simple random samplings are easy to apply, but difficult to conduct, because they entail a lot of travelling through a selected area to visit selected samples. Two wards in each division were randomly selected, bringing the number of selected wards to 8. According to Katzenellenbogen (1997), random sampling is a selection tool that is used to select a representative sample in a population. It is also known as probability sampling, as each individual in a study population has an equal chance of being included in the sample. Each ward from a particular division was given a number. Each number was written on small pieces of paper according to its division. Then those pieces of paper from each division were folded separately, put in a basket, and

mixed vigorously. Someone was assigned to select two pieces of paper, one after another to get two wards from each division while his/her eyes were closed.

Thereafter, selection of two villages was randomly done from each selected ward, bringing all together to a total of 16 villages. The procedures to be used were the same as above. Random sampling was used in order to minimize chances of bias.

Household: A systematic sampling was also used to determine household interval in each village. This is a process whereby the first sample member is selected from the list by a random number, and subsequent members are selected according to a fixed sampling interval. Like simple random sampling, a systematic sampling gives every member of a population the same chance of being selected into the sample (Katzenellenbogen, 1997).

In addition Varkevisser, (1991), pointed out that systematic sampling is usually less time consuming, and easier to perform. However there is a risk of bias, as the sampling interval may coincide with a systematic variation in the sampling frame. In this study, a systematic sampling was done by calculating the total number of households in a particular village, divided by the number of household required to be interviewed.

Only one (woman with at least one child) respondent was taken in a household. In case of presence of more than one eligible woman in a household then random sampling was used to get one. Also, in case of the absence of a woman with at least one child in a house falling in the interval, the next house was considered.

3.6.1 Sampling frame

A sampling frame is (usually) a list of population elements from which a sample can be drawn.

Table 6. Sampling frame showing number of respondents and place where they will be obtained.

Divisions	Wards	Villages	Total Women with at least one child (19 –49years).To be interviewed per each village	Total Women with at least one child (19–49years). To be interviewed in all 16 villages.
4	8	16	25	400

From the population data available in the district, a total of 400 pregnant women were interviewed. As is the norm of systematic sampling and community surveys, it was feasible to determine household interval in each village. The number of households to be incorporated in the study were determined by the number of households available in a particular village, in relation to the number of women with at least one pregnancy/birth to be interviewed in that village, thus the household interval.

Information on the number of households is available from the 2002 census, and in village government offices. In order to establish the starting point, the village government offices were taken as the point of reference starting point for the sampling. In case of absence of a woman with at least one child in a house falling within the interval, the next house was considered.

3.7 Questionnaire

For interviews, questionnaires comprising open and close-ended questions were used. Previously used questionnaires were adapted (Tlebere et al., 2007). For consistencies of responses from the respondents, the questionnaire was translated into Kiswahili, the native language in Tanzania.

3.8 Pilot Testing

The data collection tool was piloted in Katunduru village – Ilima ward to assure understanding and use of the tool in this local context. Final adjustments were made based on results of the pilot test. As the questionnaires were written in native language - Kiswahili, it found that to be understandable and user - friendly. Thus, no changes were made.

3.9 Data collection

Data were collected using structured and semi-structured (open-ended and closed-ended questions) questionnaires. This maximizes the quality of data collected and reduces the chance of bias.

Data were collected by the principal investigator, assisted by two research assistants.

3.10 Validity and Reliability

An already validated and established questionnaire was used (*Mother's Interview Good Start Maternal and Neonatal Health Study - South Africa, 03/12/04 as reported in Tlebere et al., 2007).*

Training of data collectors was done.

For consistence of responses from the respondents, the questionnaires were translated into Kiswahili, the native language in Tanzania.

Recall bias may be present, as some women were asked to recall events (births) that may have occurred many years before the survey.

3.11. Analysis and Presentation of Data

The process of data analysis entailed screening of data to ensure that all relevant responses are filled. Coding and sorting of the questionnaires were done on a daily basis, and discrepancies resolved. Data entry was done after all data had been collected, screened, coded and sorted. The researcher, a research statistician, and a research assistant were responsible for data entry and final analysis. For analysis, a single variable analysis and a scoring system for accessibility and acceptability were used.

Information from the data collection tools were transferred to EpiInfo 2002 for analysis. Primarily descriptive statistics were employed, including means and standard deviation for continuous data, and frequencies and cross-tabulations for categorical data. Socio-demographic data was obtained to give the description of the study population. Analyses of the semi-structured interview focused around the four objectives. Analytic data were compared using Students t-test or chi-square to examine factors associated with home delivery. Alpha was set at 0.05. Results are presented using descriptive statistics, e.g. means or percentages, in the form of tables, pie charts, and bar charts.

3.12. Dissemination of Information.

The current study information will be disseminated to the full district Council members. This is the setting where all representatives of the community members and councillors meet. In addition, donors funding the study, as well as, regional medical officers and health facility workers in the district will benefit from the knowledge acquired. Implementing intervention plans that were resulted from the study findings

will further bring the benefits to the community. However, the latter will depend on availability of funds from interested development partners. Some copies of the dissertation are made available to the Faculty, and the Ministry of Health in Tanzania. Copies of extracts will be sent to Journals for possible publication, and the material may be used in relevant scientific conferences.

3.13 Ethical clearance:

Permission to conduct the study was obtained from the District Council Officer, District medical officer, and from respective divisions and village leaders. Respondents were asked for willingness to participate in the study, the respondents were informed about the purpose, process and limits to confidentiality; also they were be informed on how the data will be recorded, stored and processed. Varkevisser and colleagues suggest, "As we develop our data collection techniques, we need to consider whether our research procedures are likely to cause any physical or emotional harm" (Varkevisser et al. 1991). Furthermore, Babbie (1995) points out "ethical procedure involves accurately informing subjects or respondents about the nature of the research and obtaining their verbal or written consent on willingness to participate". Thus the data obtained will be more valid and reliable.

Among methods for dealing with ethical issues as recommended by Varkevisser, et al. 1991 includes:

- Obtaining informed consent prior to the study and before the interview begins.
- Not exploring sensitive issues before a good relationship has been established with the informants
- Ensuring the confidentiality of data obtained, and

- Learning enough about the culture of informants to ensure it is respected during the data collecting process.

In order to conduct this study, permission were obtained from the following authorities:

i) The University of the Western Cape faculty board research committee.

ii) The University of the Western Cape Senate Research committees (ethics clearance).

iii) The Rungwe district council.

iv) The Rungwe District Medical Officer.

v) The leaders from respective divisions, wards and villages.

The respondents/participants were asked for willingness to participate in the study, the respondents were informed about the purpose, process, and the confidentiality of their responses. Participants were clearly understood the information sheet (detailed informed consent) prior to their interview. Also, they were informed on how the data would be recorded, stored, processed and used. Participants were free to refuse to participate or withdraw at any stage of the research without being affected in any way. The data obtained from the research will be strictly used for the purpose outlined before, but may be used for published or unpublished research at a later stage without further consent. Any future analysis will maintain confidentiality of the data. Any changes from agreement during the study with the participant were renegotiated.

Copies of the dissertation will be made available to the Faculty of Community and Health Sciences, the University of the Western Cape (UWC), and in the Ministry of Health headquarters in Tanzania. Extracts from the research may be used in relevant scientific conferences. The principal investigator primarily conceived the idea for this research after critically going through the Rungwe district medical officer's five(5)

year report from year 2000 to 2004, which showed a declining number of women delivering at health facility, year 2000(86.7%), 2001(62.0%), 2002(72.0%), 2003(38.0%) and 2004 (47.0%).

The financial support for this research is the principal investigator's employer (The Ministry of Health and Social Welfare in Tanzania).and the researcher himself.

CHAPTER 4 RESULTS

4.1 DESCRIPTION OF SAMPLE

The results presented in this section reflect data on all women who participated in the study, from the semi-structured interviews. Detailed tables containing these data can be seen in the appendices. Results giving an overview of the number of respondents, number of divisions, number of wards, number of villages and households included in the study, the demographic profile, socio-economic status, accessibility and acceptability to health services/TBAs are as presented below.

Table 1: Study sites, households and sample Drawn in the district.

	Divisions	Wards	Villages	Households	Women in Reproductive Age
Total number in a District	4	30	162	73200	62,953
Included in the study	4	8	16	400	400
Percentages	100	26.66	9.88	0.55	0.64

The table above shows that all four divisions out of four divisions in the district were included in the study; 8 (26.66%) wards out of 30 wards were included in the study; 16 (9.88%) villages out of 162 villages were included in the study; 400 (0.55%) households out of 73200 households were included in the study and 400 (0.64%) eligible women out of 62,953 women in reproductive age were included in the study.

Table 2: Study sample Drawn from four sites/Divisions.

	SITES/DIVISIONS				
	UKUKWE	TUKUYU MJINI(URBAN)	PAKATI	BUSOKELO	TOTAL
PARTICIPANTS TOTAL NUMBES (#)	100	100	100	100	400
(%)	100	100	100	100	100

The table above shows that 100 eligible participants were then drawn from each division making a total sample of 400 eligible participants in the district.

Also it was found that the mean number of eligible women to be interviewed were similar across all households i.e 1.09 with a Std. Dev. of 0.4544, except for Ukukwe Division which had slightly more on average (mean 1.25, SD0.79; p-value 0.0012). There were a minimum of one eligible woman and maximum of 6 eligible women in households. By household, it found that there were 376 households with only one eligible participant, 16 households each household had two eligible participants, five households each had three eligible participants and three households each one of the three household consisted of four, five and six eligible participants respectively.

Table 3: District Socio Economic Variables by Division

Socio Economic Variable	Answer	Ukukwe #(%)	Tukuyu #(%)	Pakati #(%)	Busokelo # (%)	Total	p-Value
Type of Water source	Piped - inside house	3 (3%)	24(24%)	0 (0%)	1 (1%)	28 (7%)	0.00
Type of Water source	Piped – yard	17(17%)	29(29%)	0 (0%)	5 (5%)	51 (12.8%)	
Type of Water source	Piped – public	36(36%)	45(45%)	2 (2%)	52(52%)	135 (33.8%)	
Type of Water source	Borehole/well	24(24%)	2(2%)	67 (67%)	28(28%)	121 (30.3%)	
Type of Water source	Rive/Stream	19(19%)	0(0%)	31(31%0	14(14%)	64 (16.0%)	
Type of Water source	Water tanker	1(1%)	0(0%)	0(0%)	0(0%)	1 (0.3%)	
Total		100 (100%)	100 (100%)	100(100%)	100 (100%)	400 (100%)	
Type of toilet	Flush toilet.	7(7%)	15 (15%)	0 (0%)	0 (0%)	22 (5.5%)	0.00
Type of toilet	Pit latrine	92 (92%)	85 (85%)	100 (100%)	100 (100%)	377 (94.3%)	
Type of toilet	Ventilated pit lat	1(1%)	0(0%)	0(0%)	0(0%)	1 (0.3%)	
Total		100(100)	100(100)	100(100)	100(100)	400 (100%)	
Type of Main fuel used for cooking	Electricity.	6(6%)	1(1%)	0(0%)	0(0%)	7 (1.80%)	0.00
Type of Main fuel used for cooking	Charcoal	14(14%)	65(65%)	1(1%)	0(0%)	80 (20.00%)	
Type of Main fuel	Wood	80(80%)	34(34%)	98(98%)	100(100%)	312	

used for cooking						(78.00%)	
Type of Main fuel used for cooking	Other	0(0%)	0(0%)	1(1%)	0(0%)	1 (0.30%)	
Total		100 (100.0%)	100 (100.0%)	100 (100.0%)	100 (100.0%)	400 (100%)	
Type of the house	Bricks	68(68%)	79(79%)	50(50%)	62(62%)	259 (64.80%)	0.0005
Type of the house	Mud	32(32%)	20(20%)	46(46%)	33(33%)	131(32.80%)	
Type of the house	Wood	0(0%)	1(1%)	4(4%)	5(5%)	10(2.50%)	
Total		100 (100.0%)	100 (100.0%)	100 (100.0%)	100 (100.0%)	400(100%)	
Type of Religion	Christian	95(95%)	92(92%)	100(100%)	98(98%)	385(96.2%)	0.0104
Type of Religion	Muslim	3(3%)	8(8%)	0(0%)	1(1%)	12(3.0%)	
Type of Religion	Pagan	2(2%)	0(0%)	0(0%)	1(1%)	3(0.8%)	
Total		100 (100.0%)	100 (100.0%)	100 (100.0%)	100 (100.0%)	400(100%)	
Marital status	Single - Never mar	8(8%)	7(7%)	3(3%)	2(2%)	20(5.0%)	0.0383
Marital status	Married – monogamous	65(65%)	78(78%)	78(78%)	84(84%)	305(76.2%)	
Marital status	Married - polygamous	7(7%)	6(6%)	10(10%)	4(4%)	27(6.8%)	
Marital status	Widowed	9(9%)	5(5%)	3(3%)	8(8%)	25(6.2%)	
Marital status	Divorced/separated	11(11%)	4(4%)	6(6%)	2(2%)	23(5.8%)	
Total		100 (100.0%)	100 (100.0%)	100 (100.0%)	100 (100.0%)	400(100%)	
Education level	No formal Schooling	5(5%)	2(2%)	1(1%)	2(2%)	10(2.5%)	0.0060

Education level	Primary School		91(91%)	87(87%)	97(97%)	97(97%)	372(93%)	
Education level	Secondary School		4(4%)	11(11%)	2(2%)	1(1%)	17(4.2%)	
Total			100 (100.0%)	100 (100.0%)	100 (100.0%)	100 (100.0%)	400(100%)	
Source of income	Currently employed	Yes	15(15.0%)	16(16.0%)	6(6.0%)	6(6.0%)	43(10.8%)	0.0238
		No	85(85.0%)	84(84.0%)	94(94.0%)	94(94.0%)	357(89.3%)	
Total			100(100.0%)	100(100.0%)	100(100.0%)	100(100.0%)	400(100.0%)	
Source of income	Regular employment	Yes	14(14.0%)	15(15.0%)	5(5.0%)	5(5.0%)	39(9.8%)	0.0161
		No	86(86.0%)	85(85.0%)	95(95.0%)	95(95.0%)	361(90.3%)	
Total			100(100.0%)	100(100.0%)	100(100.0%)	100(100.0%)	400(100.0%)	
Source of income	Irregular employment	Yes	3(3.0%)	2(2.0%)	1(1.0%)	1(1.0%)	7(1.8%)	0.6595
		No	97(97.0%)	98(98.0%)	99(99.0%)	99(99.0%)	393 (98.3%)	
Total			100(100.0%)	100(100.0%)	100(100.0%)	100(100.0%)	400(100.0%)	
Source of income	Home employment	Yes	89(89%)	86(86%)	94(94%)	97(97%)	366(91.5%)	0.0246
		No	11(11.0%)	14(14%)	6(6.0%)	3(3.0%)	34(8.5%)	
Total			**100 (100.0%)**	**100 (100.0%)**	**100 (100.0%)**	**100 (100.0%)**	**400(100.0%)**	

Socio-economic Status.

The table above shows the socio-economic status in the district as most households 135 (33.75%) use piped-public and 121 (30.25%) use Borehole/well as the main source of water; and 377(94.25%) use Pit Latrine as a main type of Toilet; 312 (78.00%) households use wood as a main type of fuel for cooking. Also 259 (64.75%) households have houses made out of Bricks and 131(32.75%) have houses made out

of wood. Only 39 (9.8%) of households depend on regular employment. However, it was found that the majority 366 (91.50%) of women depend on home employment (income generating activities performed at home) and only 43 (10.75%) are currently employed; and 7 (1.8%) depend on irregular employment.

By sites in general, a number of socio-economic variables show that participants from Pakati and Busokelo divisions have significantly poorer resources than those in Tukuyu and Ukukwe divisions. As can be seen in the table above, thirty one percent (31%) of participants in Pakati get their household water from river or streams. In contrast at least 24% of the participants in Tukuyu and 3% in Ukukwe have piped water inside their houses or yards. Also it shows that in Pakati and Busokelo 100% of participants had pit latrines while at least 15% of participants in Tukuyu and 7% Ukukwe had flush toilets. Not only that but also 98% of the participants from Pakati and 100% in Busokelo use wood as their main cooking fuel whilst at least 6% in Ukukwe and 1% in Tukuyu use electricity as their main cooking fuel. In addition 4% of participants in Pakati and 5% in Busokelo had their houses made out of wood whilst 79% of participants in Tukuyu and 68% in Ukukwe had their houses made out of bricks. All of these differences were statistically significant.

There were also large differences between the sites/divisions in terms households' access to employment in the district. In Tukuyu, at least 17% of household and 15% in Ukukwe had someone employed compared to only 5% of households in Pakati and 6% in Busokelo. In contrast, there were no large differences between the sites in terms of home employment dependants; however, 95% of households from Pakati and 97% in Busokelo had more home employment dependants compared to 89% of households in Ukukwe and 85% in Tukuyu. These differences were statistically significant.

In terms of households' access to education, 93% of households in the district had someone with up to primary school education level. By sites, there were no large difference between the sites as 97% of households in Pakati and Busokelo had someone with up to primary school education level as well as 91% in Ukukwe and 87% in Tukuyu. In contrast, only 2.5% of households in the district had no formal schooling and there were no large differences between the sites as there were 1% from Pakati and 2% in Busokelo and Tukuyu and only 5% participants in Ukukwe had no formal schooling. Also, only a total of 4.2% households in the district had someone with up to secondary school education level. In three sites, 1% of households in Busokelo, 2% in Pakati and 4% in Ukukwe, had someone with up to secondary school education level compared to 11% in Tukuyu urban.

The predominant ethnic group 96.25% is Nyakyusa tribe; followed by Ndali 14 (3.5%) and the rest were one or less than one percent. Also the table shows that 385 (96.20%) of women are Christians and only 12(3.0%) are Muslims and 3(0.8%) are Pagans. By sites, it found that there were more Christians in each division with no large differences as 95% were in Ukukwe, 92% were in Tukuyu, 100% were in Pakati and 98% were in Busokelo compared to other religions. However, there were not any Muslims and pagans in Pakati and there were more Muslims (8%) in Tukuyu and only 3% in Ukukwe and lastly 1% in Busokelo. Although these differences were smaller than the socio-economic variables they were still statistically significant.

In terms of marital status, it was found that 305(76.25%) of women are married-monogamous in the district. There were no large differences by sites as there were 78% married-monogamous women in Pakati and Tukuyu, 84% in Busokelo and 65% in Ukukwe. In contrast, there were only a total of 6.8% married-polygamous in the district with mild differences by sites. However, Pakati seems to have slightly more

married-polyamous women (10%) compared to other sites. As 7% married-polygamous women were in Ukukwe, 6% married-polygamous women in Tukuyu and lastly 4% in Busokelo. Also, there were only a total of 6.2% widowed women in the district with mild difference by sites. However, there were more widowed women in Ukukwe (9%) and (8%) in Busokelo compared to (5%) widowed women in Tukuyu and lastly (3%) in Pakati. Not only that but also there were a total of 5% single-never married women in the district with significant difference by sites. As it found in Urban areas, there were (8%) more single-never married women particularly in Ukukwe and (7%) in Tukuyu compared to rural areas as it found that (3%) single-never married women were in Pakati and lastly only (2%) were in Busokelo. Once again overall these differences across sites were statistically significant.

Table 4 Comparing mode of travel to Clinic, Hospital and TBAs by Divisions.

Mode of travel to the nearest clinic (n =400)		**Ukukwe**	**Tukuyu**	**Pakati**	**Busokelo**	**Total**	**P-Value**
Walk	N (%)	99(99)	98(98)	98(98)	100(100)	395(98.75)	0.5265
Taxi/bus	N (%)	1(1)	2(2)	2(2)	0(0)	5(1.25)	
Total		100	100	100	100	400	
Mode of travel to the nearest hospital (n=400)		**Ukukwe**	**Tukuyu**	**Pakati**	**Busokelo**	**Total**	
Walk	N (%)	24(24.0)	93(93.0)	50(50.0)	66(66.0)	233(58.25)	0.0000
Taxi/Bus	N (%)	76(76.0)	7(7.0)	50(50.0)	34(34.0)	167(41.75)	
Total		**100**	**100**	**100**	**100**	**400**	
Time Std Dev		43.91	13.38	79.41	69.62	70.27	
Mode of travel to the nearest TBAs (n =400)		**Ukukwe**	**Tukuyu**	**Pakati**	**Busokelo**	**Total**	
Walk	N (%)	54(54.0)	16(16.0)	70(70.0)	26(26)	166(41.5)	0.0000
Taxi/bus	N (%)	0(0)	3(3)	0(0)	0(0)	3(0.75)	
Not applicable	N (%)	46(46.0)	81(81.0)	30(30.0)	74(74)	231(57.75)	
Total		**100**	**100**	**100**	**100**	**400**	

Mode of Transport to Health Facilities by Sites.

The information presented in this section were collected from all the women (i.e. 400) who participated in the semi-structured interview. The table above shows that in all sites women predominantly walk to get the nearest clinic, hospital and TBAs.

There were significant differences between the sites in terms of the mode of transport to reach the health facilities especially to hospital. As seen in the table above, most of the women (94%) in Tukuyu walk to get to the hospital because the distance was shorter, and also the most women (77%) in Ukukwe use buses/taxi to get to the hospital because the transport was easy and distance was not very far to the hospital.

However, (50%) of the women in Pakati and (66%) of the women in Busokelo use both buses/taxi and walking to get to the hospital because they lived significantly longer distances away from the Hospital than the other two sites, P-value 0.0000 which statistically was significant.

Table 5: Mean and Standard Deviation of Socio-demographic variables By Divisions

Type of Socio Economic	Ukukwe Mean (SD)	Tukuyu Mean (SD)	Pakati Mean (SD)	Busokelo Mean (SD)	Total Mean (SD)	p-Value
Maternal Age	31.7 (7.6)	29.0 (6.8)	32.3 (8.0)	32.6 (7.4)	31.3 (7.5)	**0.0021**
Years living in District	17.4000 (12.88)	10.0700 (9.96)	18.9700 (11.95)	21.1500 (12.85)	16.8975 (12.63)	**0.0000**
Average Time to the nearest Clinic	28.63 (26.38)	28.18 (13.88)	66.26 (55.25)	33.46 (26.77)	39.1325 (37.49)	**0.0000**
Average Time to the nearest Hospital	60.7 (43.91)	29.75 (13.38)	126.71 (79.41)	119.55 (69.62)	84.1775 (70.27)	**0.0000**
Average Time to the nearest Traditional Birth attendants (BBA)	30.19 (18.08)	28.02 (31.97)	35.07 (40.30)	25.60 (38.30)	30.29 (34.78)	**0.4022**
Average monthly HH income	47142.85 (54329.68)	72828.57 (89410.65)	28025.64 (45796.16)	29337.50(36476.79)	43392 (61053.94)	**0.0042**
Average Cost to the nearest Hospital	576.25 (172.28)	1757.14 (1995.26)	1732.72 (625.40)	4733.33 (8438.81)	1953.60 (4385.16)	**0.0000**
Average knowledge to danger signs	3.62 (3.3175)	4.76 (2.5825)	5.33 (3.3577)	6.26 (3.3923)	4.99 (3.3098)	**0.0000**

Average Cost during last delivery	2479.80 (7142.11)	1080.00 (4325.59)	282.00 (997.92)	10209.60 (32168.76)	3581.65 (17074.49)	**0.0001**

Socio-demographic Status.

The table above show that the mean age of the participants/maternal interviewed was between 29 and 32.6 and a total mean age in a district was 31.3 years with Std. Dev.7.49. While their minimum age is 19 years and the maximum age is 49 years. However, it found that women in Pakati and Busokelo divisions had higher mean age of 32.30 and 32.60 compared to Ukukwe and Tukuyu Urban which were 31.72 and 28.97 respectively (p-value 0.0021).

Also it found that the mean years continuously living in the village were between 10.07 and 21.15 years. A total participant's mean year continuously living in a village was 16.89 years with Std Dev. 12.6335. While the minimum year continuously living in a village was 1 year (per inclusion criteria) and the maximum year continuously living in a village was 49. Busokelo and Pakati had more participants with fairly more years living in the village than in Ukukwe and Tukuyu urban divisions (P-value 0.0000), this simply because most women in Tukuyu were either employees or in business, hence migrant.

Also the table shows that a total mean household income was Tsh. 43, 392.62 with Std. Dev. 61053. While their minimum household income was Tsh.2000.00 and maximum household income was Tsh.400,000.00. By divisions it found that there were significant differences between the sites in terms of household income. Women in Busokelo and Pakati were the poorest in a district as they had the lowest household income i.e. Tsh.29,337.50 and Tsh.28,025.64 respectively compared to Tukuyu Urban and Ukukwe who had higher household income i.e.Tsh.72,828.57 and Tsh.47,142.85 respectively (p-value = 0.0042).

Also the table shows that the mean of knowledge to danger signs was 5 with Std. Dev. 3.3098. By division it found that Busokelo division had higher mean (6.26) of knowledge of danger signs than other divisions and Ukukwe division have the lowest mean (3.62) of knowledge of danger signs than other divisions (p-value=0.000).

Also the table above and Figure 3 below show that there were significant differences (p-value=0.000) between the sites in term of mean time needed to reach the nearest clinic such as 28.18 minutes in Tukuyu, 28.63 minutes in Ukukwe, and 33.46 minutes in Busokelo. However, women in Pakati division had longer mean time (66.2 minutes) to reach the nearest clinic than the other divisions. This was because women in Pakati lived longer distance away from the health facilities/clinics. In the district, the total average time to the nearest clinic was 39.1325 minutes with Std Dev. 37.4937. While the minimum time to the nearest clinic was 2.0 minutes and the maximum time was 240.0 minutes.

Also the above table and Figure 3 show that the time needed to reach the nearest Hospital was high in the district. As a total average time to get to the nearest Hospital was 84.177 minutes, Std. Dev. was 70. While the minimum time to get to the nearest Hospital was 3.00 minutes and the maximum time was 360.00 minutes. By division, there were significant differences (p-value=0.000) between the sites in terms of the mean time needed to reach the nearest Hospital. Women in Pakati had longer mean time (126.71 minutes) to reach the nearest hospital followed by Busokelo (119.55 minutes) than in Ukukwe (60.7 minutes) and in Tukuyu Urban had the lowest mean time (29.75 minutes) to the nearest hospital. This was because women in Pakati and Busokelo were lived substantially longer distances away from the nearest Hospital.

Also it was found that there were no significant difference (p-value=0.4022) between the sites in term of mean time needed to reach the nearest traditional birth attendant

i.e. they were between 25.60 and 35.07. The total mean time needed to reach a traditional birth attendant was 30.29 minutes with Std. Dev.34.78.

Also the table shows that the mean cost to the nearest hospital was Tsh.1953.00 with Std Dev. 4385.1625. While the minimum cost to the nearest hospital was Tsh. 100.00 and the maximum cost to the nearest hospital was Tsh.30, 000.00. By division it shows that the mean cost to the nearest hospital was fairly higher i.e. Tsh. 4733.33 in Busokelo division possibly due to long distance to the nearest hospital compared to the less mean cost in Pakati (Tsh.1732.72) and Tukuyu Urban (Tsh.1757.14) and least Tsh. 576.25 in Ukukwe as possibly they were living fairly near to the nearest hospital with Std. Dev. 8438.817, 625.404, 1995.26, 172.28 respectively and P-Value 0.0000 which statistically was significant.

There were significant difference (p-value=0.0001) in terms of cost during last delivery by division i.e. they were between Tsh. 282.00 and Tsh. 10209.60. Women in Pakati had the lowest mean cost during the last delivery which was Tsh. 282.00; this was because most of women delivered at home. However, in Tukuyu was Tsh. 1080.00, because they lived short distance from the health facilities, while in Ukukwe was Tsh. 2479.80 and in Busokelo was Tsh. 10209.60 because they lived significantly long distance from the health facilities. A total mean cost during the last delivery was Tsh. 3581.65 with Std Dev. 17074.49.

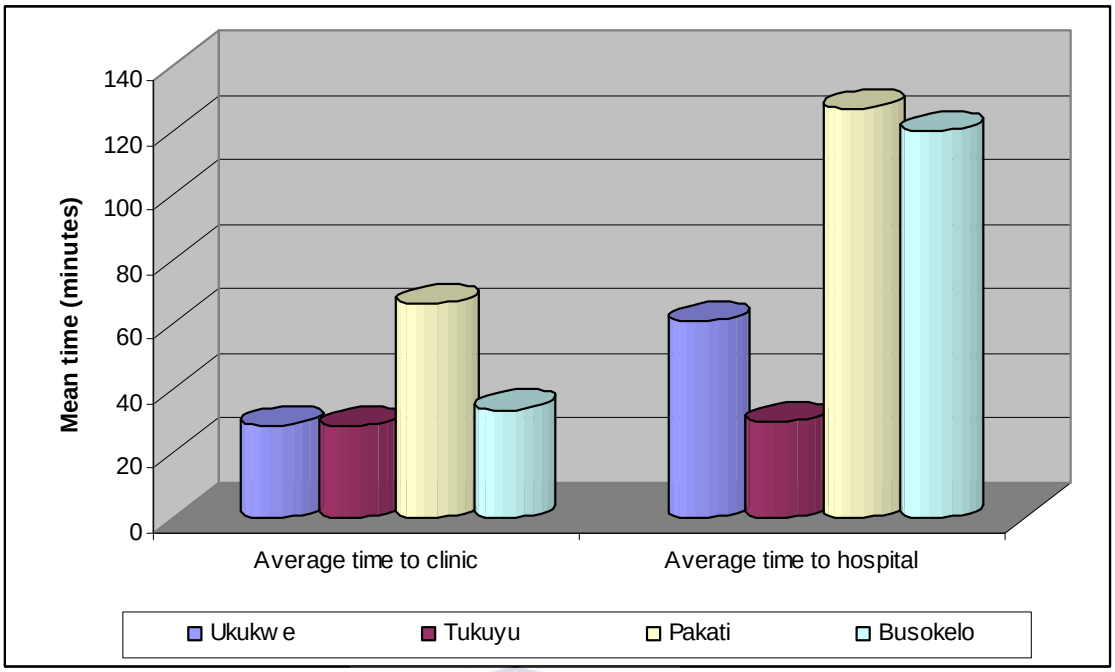


Figure 3: Comparing Average Travel Times to the Nearest Clinic and Hospital from the Four Divisions

Table 6: Comparing the gestational age when started to attend ANC by sites.

Division	1-4 months	5-8 months	Total
Ukukwe	44(44.4)	55(55.6)	99
Tukuyu	44(44.9)	54(55.1)	98
Pakati	49(49.0)	51(51.0)	100
Busokelo	47(47.5)	52(52.5)	99
Total	**184(46.5)**	**212(53.5)**	**396**

The table above show that most pregnant women 212 (53.5%) started to attend Antenatal clinic at 5-8 months old of pregnancy and only 184 (46.5%) of pregnant women started to attend antenatal clinic at 0-4 months old of pregnancy.

2.0 OBJECTIVE 1:

SOCIODEMOGRAPHIC, CULTURAL AND KNOWLEDGE FACTORS

Table 7A: Comparison of total deliveries by sites and place of delivery (in Hospital, Clinic, Home and BBAs) during last delivery

Place of Delivery	Ukukwe	Tukuyu	Pakati	Busokelo	Total
1. Hospital	36(36.0)	81(81.0)	25(25.0)	32(32.0)	174(43.5)
2. Clinic	26(26.0)	4(4.0)	13(13.0)	38(38.0)	81(20.3)
3. Home with TBAs	7(7.0)	3(3.0)	17(17.0)	6(6.0)	33(8.3)
4. Home without TBAs	30(30.0)	10(10.0)	43(43.0)	24(24.0)	107(26.8)
5. Birth Before Arrival.	1(1.0)	2(2.0)	2(2.0)	0(0)	5(1.25)
Total	100(100)	100(100)	100(100)	100(100)	400(100)

The table above shows that there were different number of deliveries in clinics i.e. they were between 4.0% and 38.0%. Many of women who gave birth at clinic were mainly from Busokelo (38.0%) as they lived far away from hospital, followed by Ukukwe (26.0%), Pakati (13.0%) where also women lived far away from hospital. However, Tukuyu had the lowest number of deliveries during last deliveries in clinics with only 4.0%. This was simply because in Tukuyu women prefer to deliver in Hospital than in clinics as they live closer to hospital than to clinics compared to than other divisions.

Also, there were significant difference (p-value =0.0000) across all divisions in terms of total number of deliveries during the last delivery in Hospital i.e. were between 25.0% and 81.0%. Pakati and Busokelo had the lowest total number of deliveries in hospital during last delivery i.e. 25.0% and 32.0% respectively compared to Ukukwe and Tukuyu i.e. 36.0% and 81.0% respectively. During last delivery, many women who delivered at home with the assistance of TBAs and without the assistance of TBAs were from Pakati 60 (60.0%) and Ukukwe 37 (37.0%) divisions compared to

Busokelo 30 (30.0%) and Tukuyu 13 (13.0%) divisions. And 36.4% of the total numbers of home deliveries 8.3% were assisted by TBAs.

Table7B: Comparison of participant's attendance to antenatal clinic (ANC) in all pregnancies by Division.

Division		**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**Total**
1.UKUKWE	N	97	85	64	46	22	11	7	2	334
	%	97.0	98.8	95.5	100.0	100.0	100.0	100.0	66.7	
2.TUKUYU MJINI (URBAN	N	96	69	42	29	15	6	2	1	260
	%	96.0	98.6	97.7	100.0	100.0	100.0	100.0	100.0	
3.PAKATI	N	99	90	76	52	28	16	5	3	369
	%	99.0	98.9	100.0	98.1	96.6	100.0	100.0	100.0	
4.BUSOKELO	N	100	91	76	55	38	22	9	7	398
	%	100.0	98.9	100.0	100.0	100.0	100.0	90.0	100.0	
Total	**N**	**392**	**335**	**258**	**182**	**103**	**55**	**23**	**13**	**1361**
	%	**98.0**	**98.8**	**98.5**	**99.5**	**99.0**	**100.0**	**95.8**	**92.9**	

The table above shows that there were good attendance for antenatal care clinic in all pregnancies and in all divisions

Table 8 Comparing Socioeconomic and Cultural Variables by Place of Delivery

Socio Economic Variables	Facility	Birth Before Arrival (BBAs) # (%)	Clinic # (%)	Home Delivery with TBAs # (%)	Home Delivery Without TBAs # (%)	Hospital # (%)	Total # (%)	p-value
Ethinic Group(Tribe)	Nyakyusa	5 (100.0)	77 (95.1)	27 (81.8)	102 (95.3)	135 (77.6)	346 (86.5)	0.8997
	Others	0 (0.0)	4 (4.9)	6 (18.2)	5 (4.7)	39 (22.4)	54 (13.5)	
Total		**5 1.3**	**81 20.3**	**33 8.3**	**107 26.8**	**174 (43.5)**	**400 (100.0)**	
Type of Religion	Christian	4 (80.0)	79 (97.5)	32 (97.0)	105 (98.1)	165 (94.8)	385 (96.3)	0.0000
	Muslim	0 (0.0)	2 (2.5)	0 (0.0)	1 (0.9)	9 (5.2)	12 (3.0)	
	Pagan	1 (20.0)	0 (0.0)	1 (3.0)	1 (0.9)	0 (0.0)	3 (0.8)	
Total		**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5 0)**	**400 (100.0)**	
Does the Traditions/Customs/Religion/Culture prevent women from delivering at health facility?	No	5 (1.3)	80 (20.4)	33 (8.4)	105 (26.7)	170 (43.3)	393 (100.0)	Pvalu0.0000e
	Yes	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Total		**5 (1.3)**	**80 (20.4)**	**33 (8.4)**	**105 (26.7)**	**170 (43.3)**	**393 (100.0)**	
Education	No formal schooling	1 (20.0)	2 (2.5)	1 (3.0)	5 (4.7)	1 (0.6)	10 (2.5)	0.0271
	Primary School	4 (80.0)	78 (96.3)	32 (97.0)	100 (93.5)	158 (90.8)	372 (93.0)	
	Secondary School	0 (0.0)	1 (1.2)	0 (0.0)	2 (1.9)	14 (8.0)	17 (4.3)	
	Technical/Vocational	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.6)	1 (0.3)	
Total		**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5)**	**400 (100.0)**	
Marital Status	Divorced/Separated	0 (0.0)	4 (4.9)	0 (0.0)	8 (7.5)	11 (6.3)	23 (5.8)	0.9155
	Married – Monogamuous Relationship	5 (100.0)	65 (80.2)	26 (78.8)	79 (73.8)	130 (74.7)	305 (76.3)	
	Married – polygamous Relationship	0 (0.0)	4 (4.9)	4 (12.1)	8 (7.5)	11 (6.3)	27 (6.8)	
	Single --Never Married	0 (0.0)	2 (2.5)	2 (6.1)	5 (4.7)	11 (6.3)	20 (5.0)	
	Widowed	0 (0.0)	6 (7.4)	1 (3.0)	7 (6.5)	11 (6.3)	25 (6.3)	
Total		**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5)**	**400 100.0**	
Type of water Source	Borehole/well	1 (20.0)	21 (25.9)	15 (45.5)	48 (44.9)	36 20.7	121 30.3	0.0000
	Piped – Inside house	0 (0.0)	3 (3.7)	2 (6.1)	1 (0.9)	22 12.6	28 7.0	
	Piped - public	3 (60.0)	34 (42.0)	5 (15.2)	27 (25.2)	66 37.9	135 33.8	
	Piped - Yard	0 (0.0)	10 (12.3)	0 (0.0)	8 (7.5)	33 19.0	51 12.8	
	River/Stream	1	13	11	22	17	64	

			(1.6)	(20.3)	(17.2)	(34.4)	26.6	16.0	
	Water Tanker		0 (0.0)	0 (0.0)	0 (0.0)	1 (0.9)	0 (0.0)	1 (0.3)	
Total			**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5)**	**400 (100.0)**	
Type of Toilet used	Flush Toilet		0 (0.0)	3 (3.7)	1 (3.0)	1 (0.9)	17 (9.8)	22 (5.5)	0.0503
	Pit Latrine		5 (100.0)	77 (95.1)	32 (97.0)	106 (99.1)	157 (90.2)	377 (94.3)	
	Ventilated Pit Latrine		0 (0.0)	1 (1.2)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.3)	
Total			**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5)**	**400 (100.0)**	
Type of Main fuel used for cooking	Charcoal		2 (40.0)	10 (12.3)	2 (6.1)	7 (6.5)	59 (33.9)	80 (20.0)	0.0000
	Electricity		0 (0.0)	1 (1.2)	0 (0.0)	0 (0.0)	6 (3.4)	7 (1.8)	
	Other		0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.6)	1 (0.3)	
	Wood		3 (60.0)	70 (86.4)	31 (93.9)	100 (93.5)	108 (62.1)	312 (78.0)	
Total			**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5)**	**400 (100.0)**	
Type of House	Bricks		2 (40.0)	48 (59.3)	21 (63.6)	58 (54.2)	130 (74.7)	259 (64.8)	Pvalue 0.0385
	Mud		3 (60.0)	30 (37.0)	11 (33.3)	45 (42.1)	42 (24.1)	131 (32.8)	
	Wood		0 (0.0)	3 (3.7)	1 (3.0)	4 (3.7)	2 (1.1)	10 (2.5)	
Total			**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5)**	**400 (100.0)**	
Source of Income	Currently Employed	No	5 (100.0)	71 (87.7)	32 (97.0)	104 (97.2)	145 (83.3)	357 (89.3)	0.0027
		Yes	0 (0.0)	10 (12.3)	1 (3.0)	3 (2.8)	29 (16.7)	43 (10.8)	
	Total		**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5)**	**400 (100.0)**	
Source of Income	Regular Employment	Yes	0 (0.0)	8 (9.9)	0 (0.0)	1 (0.9)	30 (17.2)	39 (9.8)	0.0001
		No	5 100.0	73 90.1	33 100.0	106 99.1	144 82.8	361 90.3	
	Total		**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5)**	**400 (100.0)**	
Source of Income	Irregular Employment	**Yes**	0 (0.0)	2 (2.5)	1 (3.0)	1 (0.9)	3 (1.7)	7 (1.8)	0.9003
		No	5 (100.0)	79 (97.5)	32 (97.0)	106 (99.1)	171 (98.3)	393 (98.3)	
	Total		**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5)**	**400 (100.0)**	
Source of Income	Home Employment	Yes	5 (100.0)	76 (93.8)	32 (97.0)	105 (98.1)	148 (85.1)	366 (91.5)	0.0015
		No	0 (0.0)	5 (6.2)	1 (3.0)	2 (1.9)	26 (14.9)	34 (8.5)	
	Total		**5 (1.3)**	**81 (20.3)**	**33 (8.3)**	**107 (26.8)**	**174 (43.5)**	**400 (100.0)**	
Zeros for other sources of income (contibutions from others, state pension/grant)									

COMPARING SOCIOECONOMIC AND CULTURAL VARIABLES BY PLACE OF DELIVERY:

The table above shows that the Nyakyusa tribe was a predominant ethnic group which also was leading to baby delivery at home compared to other ethnic groups with P-value 0.0012. Also it found that the Christians were the leading religious group compared to others (Muslims and Pagans) in the district. Although the Muslims were fewer in the district; however they were leading to deliver in health facilities/hospital compared to the Christians with P-value 0.0002 which statistically was significant.

Also the results show that a traditions/customs/culture variable does not have any influence to decision making for place of delivery.

Also the table shows that home delivery was higher in those households which have significantly lower or poorer socioeconomic status than those households which have good resources of socioeconomic status. i.e. especially to those households who were getting water from borehole/well or stream compared to those whose source of water was Piped -Public, Piped -yard or inside house, P-value 0.0001 which statistically was significant. The same findings seemed to those households who used wood as a main source of fuel compared to those households who used charcoal and electricity as a main source of fuel P-value 0.0000 which statistically was significant. Although, the rest of the socioeconomic variables (type of toilet, type of house, marital status,) did not have significant statistical p-value (i.e. p-values were more than 0.05). The same to source of income: it found that home delivery was higher to those women who were not currently employed, without any regular employment, with no irregular employment and with home employment, compared to those households with someone employed. Also to those women with primary school, technical/vocational

level and no formal schooling compared to those households with someone had education level of secondary school.

Table 9: Mean and Standard Deviation of Socio-demographic variables and Knowledge by Place of Delivery

Socio-demographic Variable	Birth Before Arrival (BBA)	Home with TBAs	Home without TBAs	Clinics	Hospitals	
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	P-Value
Maternal Age	**23.20 (3.83)**	**32.22 (8.45)**	**31.40 (7.56)**	**30.88 (6.60)**	**31.41 (7.46)**	**0.1255**
Years living in District	**9.60 (9.50)**	**19.08 (13.91)**	**16.76 (11.98)**	**18.21 (12.15)**	**14.29 (12.54)**	**0.067**
Number of eligible women in a household	**1.00 (0.00)**	**1.05 (0.44)**	**1.10 (0.50)**	**1.10 (0.38)**	**1.11 (0.44)**	**0.89**
Average Knowledge to Danger Signs	**3.400 (2.07)**	**5.0303 (3.34)**	**5.56 (2.24)**	**5.11 (3.93)**	**5.24 (3.03)**	**0.039**
Average number of danger signs known by woman	**3.4 (2.07)**	**5.0 (3.3)**	**4.5 (2.2)**	**5.1 (3.9)**	**5.2 (3.0)**	**0.3979**

COMPARISON OF MEAN SOCIODEMOGRAPHIC VARIABLES AND KNOWLEDGE BY PLACE OF DELIVERY.

The table above shows that maternal mean age was higher (31.40-32.22) for those who delivered at Home compared to those who delivered at health facilities (30.88-31.41)-(hospital and clinics) and Birth Before arrival (23.20) (p-value 0.039 which statistically was significant).

Also the results show that the mean years continuously living in a village was slightly higher for those who delivered at home with TBAs and Clinics (19.08 and 18.21 respectively) compared to those who delivered at home without TBAs and at Hospital and Birth before Arrival (BBAs) (16.76 and 14.29 and 9.60 respectively) but this difference was P-value 0.067 which statistically was not significant.

Also the result shows that mean number of eligible woman in a household was one (1) to every place of delivery and P-value 0.89 which statistically was not significant.

Also the table shows that there were significant difference across all places of delivery in terms of average number of the knowledge to danger signs known by woman i.e. were between 3.4 (for BBAs) and 5.5 (for those who delivered at home and health facilities) however the p-value 0.39 was not statistically significant.

Table 10: Danger Signs known by women

DANGER SIGNS	Spontaneous	Prompted	Total
Previous bad obstetric history / abdominal scars / previous stillbirth	15(3.7)	0(0)	15 (3.7%)
Hypertension / high blood pressure	58(14.5)	86(21.5)	144 (36.0%)
severe headaches	22(5.5)	82(20.5)	104 (26.0%)
Swelling of face, hands, feet or legs	99(24.7)	124(31)	223 (55.75%)
fits/seizures	11(2.75)	59(14.75)	70 (17.5%)
loss of consciousness	9(2.25)	5(1.25)	14(3.5%)
Anaemia	60(15)	111(27.75)	171 (42.75%)
pallor/pale	0(0)	1(0.25)	1 (0.25%)
Severe fatigue/exhaustion/unable to do normal daily chores	30(7.5)	77(19.25)	107 (26.75%)
Breathlessness/problems breathing/short of breath	30(7.5)	77(19.25)	107 (26.75%)
cessation of fetal movement / baby does not move	12(3)	11(2.75)	23 (5.75%)
abnormal lie / position of foetus /breech (bottom or legs first)	12(3)	13(3.25)	25 (6.25%)
sepsis / infection	42(10.5)	19(4.75)	61 (15.25%)
Fever	55(13.75)	27(6.75)	82 (20.50%)
cough that lasts several weeks or more	82(20.5)	112(28)	194 (48.50%)
loose stools (diarrhoea) that last several weeks or more	2(0.5)	3(0.75)	5 (1.25%)
foul smelling discharge from vagina (birth canal)	2(0.5)	0(0)	2 (0.50%)
loss of weight	7(1.75)	20(5)	27 (6.75%)
Bleeding/ haemorrhage	4(1)	89(22.25)	93 (23.25%)
Multiple pregnancy / large abdomen	83(20.75)	129(32.25)	212 (53.00%)

The result above show that 223(55.75%) of women interviewed knew that swelling of face, hands, feet or legs were danger signs; followed by 212 (53.00%) of women interviewed knew that multiple pregnancy/large abdomen was a danger sign; 194 (48.50%) knew that cough that lasts several weeks or more was a danger sign; 171 (42.75%) knew that anaemia was a danger sign; 144 (36.00%) of women knew that hypertension/high blood pressure was a danger sign and lastly only 107 (26.75%) knew that severe fatigue/exhaustion/unable to do normal daily chores and breathlessness/problems breathing/short of breath were danger signs; 104(26.00%)

knew that severe headache was danger sign; 97 (24.25%) knew other factors were danger signs; 93(23.25%) knew that bleeding/haemorrhage was a danger sign; 82(20.50%) knew that fever was a danger sign and for less than 20% knew the rest danger signs. However, 41.25% of women did not know any kind of danger signs.

Table 11A: Distribution of source of information about health the mother learns during Pregnancy.

	N (%)
Health care provider at Clinic or Hospital	393(98.25)
Community Health Worker	99(24.75)
Family members	17(4.25)
Husband	*5(29.41)*
Mother	*12(70.59)*
Friends	26(6.5)
Traditional Healers	11(2.75)
Church/Other community leaders	177(44.25)
Radio	142(35.50)
Television	34(8.50)
Newspaper	20(5.00)
Other sources of info	55(13.75)

SOURCE OF HEALTH INFORMATION.

The result above show that 98.25% of women interviewed get information about health mostly through health care provider at clinic; followed by 44.25% through

church and community leaders; then 35.50% through radio; 24.75% through community health workers; 13.75% through other means and lastly 8.50% through television, 5.00% through newspapers, 4.25% through family members and 2.75% through traditional healers.

Table 11 B: Distribution of the Best source of information or Advice for Making Decisions about Health.

Best Source of information	**Total**
1. Health Workers	353 95.41%
2.Commnuity Health Worker	3 0.81%
4. Friends	1 0.27%
6. Church or Other Co	5 1.35%
7. Radio specify	4 1.08%
8.Television, specify	2 0.54%
9. Newspaper or Magazines	2 0.54%
Total	370

BEST SOURCE OF HEALTH INFORMATION FOR MAKING DECISION.

The table above show that 353 (95.41%) of women interviewed used health workers as the best source of information or advice for making decisions, followed by 5(1.35%)of women used church or other community leaders; 4(1.08%) of women used radio, and the rest less than one per cent of women used other sources (community health worker, television, newspaper or magazine and friends) as the best

source of information or advice for making decisions and none of them suggested traditional healer as the best source of information for making decision.

3.0 OBJECTIVE 2: ACCEPTABILITY

Table 12: Use of Services Related Variables by Place of Delivery for most recent pregnancy

Use of Services Acceptability Related Variables		PLACE OF DELIVERY						
		Birth Before Arrival (BBA) # (%)	Home With TBAS # (%)	Home Without TBAS # (%)	Clinic # (%)	Hospital # (%)	**Total # (%)**	P-Value
Women's attendance to Antenatal Clinic (ANC								
No		0 (0.0)	0 (0.0)	1 (20.0)	2(40.0)	2 (40.0)	**5 (100.0)**	0.429
Yes		5 (1.3)	87 (22.0)	150 (38.0)	68 (17.2)	85 (21.5)	**395 (100.0)**	
Total		**5 (1.3)**	**87 (21.8)**	**151 (37.8)**	**70 (17.5)**	**87 (21.8)**	**400 (100.0)**	
Women's pregnant age in months when they first time went to the Clinic or Hospital concerning their pregnancy	1	0 (0.0)	0 (0.0)	2(66.7)	1 (33.3)	0 (0)	**3(100.0)**	0.096
	2	0 (0.0)	5(38.5)	5(38.5)	0(0.0)	3(23.1)	**13 (100.0)**	
	3	0 (0.0)	19 (29.7)	19 (29.7)	8(12.5)	18(28.1)	**64 (100.0)**	
	4	3(2.9)	17 (16.2)	43 (41.0)	17 (16.2)	25(23.8)	**105(100.0)**	
	5	0 (0.0)	25 (23.4)	34 (31.8)	20 (18.7)	28 (26.2)	**107(100.0)**	
	6	0 (0.0)	14 (19.7)	31 (43.7)	17 (23.9)	9(12.7)	**71(100.0)**	
	7	2 (6.5)	5(16.1)	15 (48.4)	5(16.1)	4(12.9)	**31(100.0)**	
	8	0 (0.0)	2(50.0)	1(25.0)	1(25.0)	0(0.0)	**4(100.0)**	
Total		**5(1.3)**	**87 (21.9)**	**150 (37.7)**	**69 (17.3)**	**87(21.9)**	**398 (100.0)**	
How the Women were Treated by the Staff During their Antenatal Visit	Bad	0(0.0)	1(4.5)	11(50)	3(13.6)	7(31.8)	**22(100.0)**	0.216
	Good	5(1.3)	86 (23.0)	139 (37.2)	66 (17.6)	78(20.9)	**374(100.0)**	

Total		**5(1.3)**	**87 (22.0)**	**150 (37.9)**	**69 (17.4)**	**85(21.5)**	**396(100.0)**	
Did any of their family or friends Stay in the room with them throughout their labour and Birth?	No	3(1.1)	60 (21.4)	66 (23.6)	65 (23.2)	86(30.7)	**280(100.0)**	0.000
	Yes	2(1.7)	27 (22.5)	85 (70.8)	5(4.2)	1(0.8)	**120(100.0)**	
Total		**5(1.3)**	**87 (21.8)**	**151 (37.8)**	**70 (17.5)**	**87(21.8)**	**400(100.0)**	
Did the women like having their family/friend (s) with them during labour or Birth?	**No**	**2(4.1)**	**13 (26.5)**	**31 (63.3)**	**2(4.1)**	**1(2.0**	**49(100.0)**	0.269
	Yes	**0(0.0)**	**24 (29.3)**	**54 (65.9)**	**4(4.9)**	**0(0.0)**	**82(100.0)**	
Total		**2(1.5)**	**37 (28.2)**	**85 (64.9)**	**6(4.6)**	**1(0.8)**	**131(100.0)**	
Did the Women have any problems getting to the Hospital or Clinic or TBAs in Labour?	No	0(0.0)	40 (20.2)	21 (10.6)	56 (28.3)	81(40.9)	**198(100.0)**	0.000
	Yes	5(2.5)	47 (23.3)	130 (64.4)	14(6.9)	6(3.0)	**202(100.0)**	
Total		**5(1.3)**	**87 (21.8)**	**151 (37.8)**	**70 (17.5)**	**87(21.8)**	**400(100.0)**	
How the women were treated by the Health staff/TBAs /Home during the delivery	Bad	3(1.8)	6(3.6)	144 (87.3)	7(4.2)	5(3.0)	**165(100.0)**	0.000
	Good	2(09)	81 (34.5)	7(3.0)	63 (26.8)	82 (34.9)	**235(100.0)**	
Totals		**5(1.3)**	**87 (21.8)**	**152 (37.8)**	**70 (17.5)**	**87(21.8)**	**400 (100.0)**	
How would the Women rate the Labour and Birth services they received?	Average	1(0.7)	43 (31.2)	31 (22.5)	28 (20.3)	35(25.4)	**138(100.0)**	0.000
	Excellent	0(0.0)	34 (23.4)	28 (19.3)	35 (24.1)	48 (33.1)	**145(100.0)**	
	Poor	4(3.4)	10(8.5)	92 (78.6)	7(6.0)	4(3.4)	**117(100.0)**	
Totals		**5(1.3)**	**87 (21.8)**	**152 (37.8)**	**70 (17.5)**	**87(21.8)**	**400(100.0)**	
Would the women recommend the labour and birth	No	5(3.5)	26 (18.3)	108 (76.1)	2(1.4)	1(0.7)	**141(100.0)**	0.000
	Yes	0 (0.0)	61 (23.6)	43 (16.7)	68 (26.4)	86(33.3)	**258(100.0)**	

services to Other Women?						
Totals	**5 (1.3)**	**87 (21.8)**	**152 (37.8)**	**70 (17.5)**	**87(21.8)**	**400(100.0)**

Totals

The results above show that there were good attendance to antenatal care 395 (98.75%) across all divisions in the district. However, despite good attendance to antenatal clinic (ANC) home delivery was higher (home delivery with TBAs and without TBAs 22.00% and 38.0% respectively) than health facility deliveries (Clinic-17.2% and Hospital-21.5%) and P-value 0.429 which statistically was not significant.

Also the results show that baby delivery at home is still high among all women interviewed regardless what age of pregnancy at first time a woman started to attend antenatal clinic (ANC) (p-value 0.096 which statistically was not significant).

Also the result show that baby delivery at home 12 (54.50%) was high among those women who were treated badly by health staff during their antenatal visit than health facility deliveries 10(45.40%). However, baby delivery at home 225 (60.2%) was also high among those women who were treated well by health staff, p-value 0.216 which statistically was not significant.

The results show that health facility delivery (clinic and hospital) 151(53.9%) was higher among those women whose family and friends did not stay with the women throughout their labour and birth than baby deliveries at home 126 (45.0%). Also it was found that baby delivery at home 112 (93.30%) was higher among those women whose family and friends stayed with women throughout their labour and birth than health facility deliveries 6(5.00%) with p-value 0.0000 which statistically was significant.

Also the results show that baby delivery at home was high 78(95.2%) among those women interviewed who would like having their family/friends during their labour or birth. However, also baby delivery at home was high 44(89.8%) among women who would not like having family/friends during their labour or birth, with p-value 0.269 which statistically was not significant

The results also show that baby delivery at home 177 (87.7%) was higher than health facilities deliveries 20 (9.9%) among those women interviewed who had problems getting to the hospital or clinics or TBAs. And it found that health facility delivery was higher 137 (69.2%) than home delivery 61(30.8%) among those women who had no problems getting to the hospital or clinics with p-value 0.0000 which statistically was significant.

Also the results show that baby delivery at home 150 (90.9%) was higher than health facility delivery 12(7.2%) among those women interviewed who were treated badly by health staff during their delivery. And it found that health facility delivery 145(61.7%) was higher than home delivery 88 (37.5%) among those women who were treated well by health staff during their delivery with p-value 0.0000 which statistically was significant.

Also the results show that baby delivery at home 74 (53.7%) was higher than health facility delivery 63(55.7%) among those women interviewed who would rate the received labour and birth service were average. And 102 (87.1%) and 11(9.4%) home and health facility deliveries respectively for those women who would rate the received labour and birth were poor. And also, it found that health facility delivery 83(57.2%) was higher than home delivery 62(42.7%) among those women who would rate the received labour and birth services were excellent with p-value 0.0000 which statistically was significant.

Also the results show baby delivery at home 134(94.4%) was higher than health facility delivery 3(2.1%) among those women who would not recommend the labour and birth services to other women. And it found that health facility delivery 154 (59.7%) was higher than baby home delivery 104 (40.3%) among those women who would recommend the labour and birth services to other women with p-value 0.0000 which statistically was significant.

Table 13: Comparison of all pregnancies by sites, place of delivery and parity

		All Pregnancies								
Sites/divisions	**Place of delivery**	**1st**	**2nd.**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**Total**
UKUKWE	**Hospital**	**35**	**26**	**18**	**16**	**7**	**3**	**2**	**0**	**107**
	Clinic	**8**	**14**	**8**	**3**	**2**	**0**	**1**	**0**	**36**
	Home	**54**	**41**	**37**	**27**	**12**	**8**	**4**	**2**	**185**
	Birth before Arrival (BBA)	**3**	**5**	**4**	**0**	**1**	**0**	**0**	**1**	**14**
	Total	**100**	**86**	**67**	**46**	**22**	**11**	**7**	**3**	**342**
TUKUYU MJINI (URBAN)	**Hospital**	**48**	**40**	**22**	**14**	**10**	**5**	**2**	**1**	**142**
	Clinic	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**
	Home	**49**	**30**	**20**	**15**	**5**	**1**	**0**	**0**	**120**
	Birth before Arrival (BBA)	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
	Total	**100**	**70**	**43**	**29**	**15**	**6**	**2**	**1**	**266**
PAKATI	**Hospital**	**21**	**22**	**14**	**10**	**7**	**2**	**0**	**1**	**77**
	Clinic	**7**	**7**	**6**	**5**	**4**	**0**	**0**	**1**	**30**
	Home	**68**	**59**	**54**	**37**	**19**	**14**	**4**	**1**	**225**
	Birth before Arrival (BBA)	**4**	**3**	**2**	**1**	**0**	**0**	**1**	**0**	**11**
	Total	**100**	**91**	**76**	**53**	**30**	**16**	**5**	**3**	**374**
BUSOKELO	**Hospital**	**30**	**28**	**20**	**11**	**10**	**9**	**3**	**1**	**112**
	Clinic	**14**	**24**	**17**	**11**	**8**	**2**	**2**	**0**	**78**
	Home	**54**	**37**	**36**	**32**	**20**	**11**	**5**	**6**	**201**
	Birth before Arrival (BBA)	**2**	**3**	**3**	**1**	**0**	**0**	**0**	**0**	**9**
	Total	**100**	**92**	**76**	**55**	**38**	**22**	**10**	**7**	**400**
TOTAL GRAND		**400**	**339**	**262**	**183**	**105**	**55**	**24**	**14**	**1382**

The table above show that a total of 1382 deliveries had taken place in the district. On regard to sites, most of them has taken place in Busokelo 400 (28.9), followed by Pakati 374 (27.1) and Ukukwe 342 (24.7) and lastly in Tukuyu 266 (19.2).

On regard to place of delivery by sites/divisions; baby delivery at home was higher in Pakati 310 deliveries, followed by Busokelo 274 deliveries, and Ukukwe 176 deliveries, possibly due to very low socioeconomic status and lastly Tukuyu Urban 100 deliveries possibly due to good socioeconomic status. On regard to parity against place of delivery, shows that the number of parity increases with the number of home deliveries compared to health facilities deliveries.

TABLE 14A:

Distribution Reasons for a woman going to ANC Clinic.

5.4 Why did you go for antenatal care?	Frequency	Percent
I worried to be neglected/ chased by nurses at the time of delivery/labour.	26	6.6%
To get advice/ Counselling/ Health education concerning my pregnancy.	34	8.6%
To get treatment.	31	7.8%
To know the progress of my pregnancy.	305	77.0%
Total	396	100.0%

REASONS FOR UTILIZATION OF HEALTH SERVICES:

The table above show various reason for the utilization of health services whereby 305(77.0%) of women interviewed were going to antenatal care (ANC) in order to know the progress of their pregnancies, followed by 34(8.6%) of women interviewed attended ANC in order to get advice/counselling/health education concerning pregnancy, 31(7.8%) of women interviewed attended antenatal care (ANC) in order to get treatment, and lastly 26 (6.6%) of women interviewed attended ANC because they were worrying to be neglected/chased by nurses at the time of delivery/labour.

TABLE 14 B:

Distribution of Reasons for a woman why or why not Recommend the ANC services to other women

5.13B Why or why not?	Frequency	Percent
Poor services/Nurses are not cooperative/Nurses harass us	10	2.5%
To get advice/ reassurance /counselling /education on pregnancy.	57	14.4%
To get good help/services when you have problems/complications.	125	31.6%
To get treatment	20	5.1%
To know the progress of pregnancy.	184	46.5%
Total	396	100.0%

REASONS FOR A WOMAN WHY OR WHY NOT RECOMMEND THE ANC SERVICES TO OTHER WOMEN:

The table above show reasons for a woman why or why not recommend the antenatal care services to other woman whereby 184(46.5%) of women interviewed explained that to know the progress of pregnancy was the reason for a woman why recommend the ANC services to other women, followed by 125(31.6%) of women interviewed explained that the reason was to get good help/services when you have problems/complications, 57(14.4%) of women interviewed explained that the reason was to get advice/reassurance/counselling/ education on pregnancy, 20(5.1%) of women interviewed explained that the reason was to get treatment and lastly10 (2.5%) of women interviewed explained that the reason not to recommend was due to poor services/Nurses were not cooperative/nurses harass women.

TABLE 14 C: Distributions of reasons for a woman why or why not recommend Labour or Birth Service to Other woman.

6.14B Why or Why not?	Frequency	Percent
Home delivery is poor/very dangerous/risk/not safe place/may get complications/	137	35.2%
Provide good delivery services/handles us properly/	227	58.4%
There were no medicine/drugs/	2	0.5%
They treat roughly/left me alone/	6	1.5%
To avoid to pay fine/to be punished/	1	0.3%
Traditional Birth Attendant (TBAs) conduct well delivery services like nurses/and cheaper	16	4.1%
Total	389	100.0%

REASONS FOR A WOMAN WHY OR WHY NOT RECOMMEND LABOUR OR BIRTH SERVICES TO OTHER WOMEN

The table above show reasons for a woman why or why not recommend labour or birth services to other women whereby 227(58%) of women interviewed explained that good delivery services/handling women properly in clinics or hospital was the reason for a woman why they recommended labour or birth service to other woman, followed by 137 (35.2%) of women explained that baby delivery at home was poor/very dangerous/risk/not safe place/may get complications was the reason for a woman; 16(4.1%) of women explained that Traditional Birth Attendants (TBAs) conducted well delivery services like nurses/and cheaper was the reason for a woman why not to recommend labour or birth service to other woman; 6(1.5%) of women explained that they were treated roughly/left alone was the reason for a woman why not to recommend labour or birth service to other woman; 2 (0.5%) of women explained that there were no medicine/drugs was the reason for a woman why not to recommend labour or birth service to other woman, and 1(0.3%) of women explained that to avoid to pay fine/to be punished was the reason for a woman why or why no recommend labour or birth service to other woman.

4.0 OBJECTIVE 3:

ACCESSIBILITY

Table 15: Comparing mode of travel by place of Delivery.

Accessibility Variables	**Delivery Places**					**P-Value**
Mode of travel to the nearest clinic (n =400)	Hospital	**Clinic**	**Home without TBA**	**Home with TBA**	**Birth Before Arrival (BBA)**	
Walk	86 (21.8%)	70 (17.7%)	149 (37.7%)	85 (21.5%)	5 (1.3%)	0.7837
Taxi/bus	1 (20.0%)	0 (0.00%)	2 (40.0%)	2 (40.0%)	0 (0.00%)	
Total						
Mode of travel to the nearest hospital (n=400)						
Walk	56 (23.9%)	36 (15.4%)	88 (37.6%)	49 (20.9%)	5 (2.1%)	0.1715
Taxi/Bus	31 (18.7%)	34 (20.5%)	63 (38.0%)	38 (22.9%)	0 (0.00%)	
Total						
Time Std Dev						
Mode of travel to the nearest TBAs (n =400)						
						0.0323
Walk	27 (16.3%)	24 (14.5%)	64 (38.6%)	49 (29.5%)	2 (1.2%)	
Taxi/bus	2 (66.7%)	0 (0.00%)	1 (33.3%)	0 (0.00%)	0 (0.00%)	
Not applicable	58 (25.1%)	46 (19.9%)	86 (37.2)	38 (16.5%)	3 (1.3%)	
Total						

The table above show that most deliveries took place at home without the assistance of TBAs followed by with assistance of TBAs and lastly at hospitals and clinics. However, wherever the place they go for labour or birth services, they went on foot as

the main mode of transport possibly due to lack of money or lack of other means of transport with p-values greater than 0.005 which statistically were not significant.

Table 16: OBJECTIVE 3. Mean and Standard Deviation of Accessibility related variables by Delivery Place

Accessibility Variable	Birth Before Arrival (BBA) Mean (SD)	Home with TBAs Mean (SD)	Home without TBAs Mean (SD)	Clinics Mean (SD)	Hospitals Mean (SD)	P-Value
Average Time to the nearest Clinic	39.00 (20.12)	40.68 (41.66)	47.76 (42.55)	26.00 (23.90)	32.93 (29.11)	0.0006
Average Time to the nearest Hospital	51.00 (41.89)	110.80 (75.82)	90.80 (75.07)	70.85 (56.30)	58.33 (54.50)	0.0000
Average Time to the nearest Traditional Birth attendants (BBA)	10.00 (7.07)	42.28 (40.53)	48.39 (46.95)	33.59 (31.47)	35.82 (31.0)	0.3192
Average Cost to the nearest Clinic	0.00 (0.00)	100.00(0.00)	660.00 (606.63)	100.00 (0.00)	933.33 (1179.62)	0.559
Average Cost to the nearest Hospital	0.00 (0.00)	2588.64 (4832.1220)	2162.67 (5053.4380)	1395.00 (2819.52)	1322.22 (3632.24)	0.478
Average Cost to the nearest Traditional Birth Attendants (BBA)	0.00(0.00)	0.00 (0.00)	28.26 (110.88)	0.00 (0.00)	33.33 (121.31)	0.366
Average cost during last delivery	0.00 (0.00)	439.393 (899.28)	28.037 (290.020)	1815.00 (2247.367)	7126.2069 (25331.896)	0.0058

Also the table show that mean time to the nearest clinic and hospital was higher for those who delivered at home compared to those who delivered at health facilities (clinics and hospital) with P-value 0.0006 and 0.0000, respectively, which statistically

was significant. However, the mean time to the nearest Traditional Birth Attendant (TBAs) for those who delivered at home compared to who delivered at health facilities was similar (p-value 0.3192).

Also the table shows that the average monthly household (HH) income was slightly higher (Tsh.60, 477.27 and Tsh. 56,171.43) for those who delivered in health facilities (clinics and hospital) compared to lower average monthly HH income for those who delivered at home although the P-value was 0.2433 which statistically was not significant.

The table shows that the average cost to the nearest clinic for hospital deliveries (933.33) was higher compared to other deliveries but his difference was not statistically significant (p-value=0.559)

Also the table shows that the average cost to reach the nearest hospital was higher (Tsh.2588.64 and Tsh. 2162.67) for those who deliver at home compared to those who deliver at health facilities (Tsh.1395.00 andTsh.1322.22)-(Clinics and Hospital) but the p-value was 0.478 which statistically was not significant.

Also the table shows that the average cost to reach the nearest Traditional Birth Attendant was lower (Tsh.28.26) for those who deliver at home specifically at home without (TBAs) compared to those who deliver at health facilities (clinics and hospital) specifically at hospital (Tsh. 33.33) with P-value 0.366 which statistically was not significant.

Also the table shows that the average cost during last delivery was higher for those who delivered at health facilities (clinics and hospital Tsh.1815.00 and Tsh.7126.20 respectively) compared to those who delivered at home (home with TBAs and without TBAs Tsh.439.39 and Tsh.28.03 respectively) with P-value 0.0058 which statistically was significant.

Table 17: Barriers to accessing ANC by Sites/Divisions

Problems attending ANC Accessibility Related Variables		Ukukwe	Tukuyu	Pakati	Busokelo	Total	P-Value
Problems attending ANC	N	43	8	45	14	110	
	%	43.43	8.16	45	14.14	27.78	0.0000
Money	N	35	6	16	8	65	
	%	35.71	6.12	16	8.08	16.46	0.0000
Transport	N	20	7	38	10	75	
	%	22.22	7.14	38	10.1	19.38	0.0077
Family members or friends	N	4	1	3	0	8	
	%	4.65	1.03	3.03	0	2.1	0.0349
Family responsibilities	N	3	1	6	1	11	
	%	3.53	1.04	6.06	1.01	2.9	0.3905
Work/Employment	N	0	0	1	0	1	
	%	0	0	1.02	0	0.26	0.0000
Health staff treatment…	N	4	0	0	1	5	

BARRIERS FOR ACCESSING HEALTH SERVICES (ANTENATAL CARE SERVICES - ANC) BY SITES

The table above show that only 8 (8.16%) of women in Tukuyu had problems attending ANC compared to other divisions in which 14 (14.14%) of women were from Busokelo, 43 (43.43%) of women were from Ukukwe and lastly 45 (45%) of women were from Pakati,. With Pakati and Ukukwe had more problems attending ANC than other divisions. In terms of types of problems; there were significant differences between the sites in terms of money problems in which 35 (35.71%) of women from Ukukwe had more problem of money followed by 16 (16%) of women from Pakati and 8 (8.08%) of women from Busokelo and lastly 6 (6.12%) of women were from Tukuyu Urban. Also there were significant differences between the sites in terms of transport problems in which 20 (22.22%) of women from Ukukwe had more

problems with transport followed by 38 (38.00%) of women from Pakati, and 10 (10.1%) of women from Busokelo and lastly 7 (7.14%) of women from Tukuyu. Also there were significant differences between the sites in terms of health staff treatment problems whereby 4 (4.0%) of women from Ukukwe had more problem of health staff treatment followed by 1 (1.0%) of woman from Busokelo and none of any woman had problem of health staff treatment from Tukuyu and Pakati. withal above p-values were 0.0000 which statistically was significant.

Also, it found that there were slight differences between the sites in terms of problems for attending ANC i.e. family members or friends, family responsibilities, and work/employment problems which were between 4 (4.65%) and 0 (0.0%) for family members or friends problems, 1 (1.01%) and 6 (6.06%) for family responsibility problems, and between 0 (0.00%) and 1 (1.02%) for work/employment problem with p-values (0.0077, 0.0349, and 0.3905 respectively) which statistically were not significant. However, Pakati had more problems of family responsibilities and work or employment than other divisions with 6 (6.06%) and 1 (1.01%) respectively and Ukukwe had more problems of family members or friends compared to other divisions with 4 (4.65%).

Table 18: Barriers to accessing ANC by Place of Delivery

Problems attending ANC Accessibility Related Variables		Delivery Places						
		Birth Before Arrival (BBA) #(%)	Home without TBAs #(%)	Home with TBAs #(%)	Clinic #(%)	Hospital #(%)	TOTAL #	P-Values
Problems attending ANC	No	5 (1.7%)	88 (30.8%)	67 (23.4%)	56 (19.6%)	70 (24.5%)	286 (100.0%)	0.0001
	Yes	0 (0.0%)	62 (56.4%)	20 (18.2%)	13 (11.8%)	15 (13.6%)	110 (100.0)	
Total		5 (1.3%)	150 (37.9%)	87 (22.0%)	69 (17.4%)	85 (21.5%)	396 100.0	
Money	No	5 (1.5%)	113 (34.0%)	77 (23.2%)	62 (18.7%)	75 (22.6%)	332 100.0 (%)	0.0223
	Yes	0 (0.0%)	37 (55.2%)	10 (14.9%)	8 (11.9%)	12 (17.9%)	67 (100.0%)	
Total		5 (1.3%)	150 (37.6%)	87 (21.8%)	70 (17.5%)	87 (21.8%)	399 (100.0%)	
Transport	No	5 (1.6%)	100 (31.9%)	70 (22.4%)	61 (19.5%)	77 (24.6%)	313 100.0 (%)	0.0002
	Yes	0 (0.0%)	50 (58.1%)	17 (19.8%)	9 (10.5%)	10 (11.6%)	86 (100.0%)	
Total		5 (1.3%)	150 (37.6%)	87 (21.8%)	70 (17.5%)	87 (21.8%)	399 (100.0%)	
Family members or friends	No	5 (1.3%)	143 (36.7%)	87 (22.3%)	68 (17.4%)	87 (22.3%)	390 100.0 (%)	0.0502
	Yes	0 (0.0%)	8 (80.0%)	0 (0.0%)	2 (20.0%)	0 (0.0%)	10 (100.0%)	
Total		5 (1.2%)	151 (37.8%)	87 (21.8%)	70 (17.5%)	87 (21.8%)	400 (100.0%)	

Family responsibilities	No	5 (1.3%)	147 (37.7%)	84 (21.5%)	69 (17.7%)	85 (21.8%)	390 100.0 (%)	0.9375
	Yes	0 (0.0%)	4 (40.0%)	3 (30.0%)	1 (10.0%)	2 (20.0%)	10 100.0 (%)	
Total		5 (1.2%)	151 (37.8%)	87 (21.8%)	70 (17.5%)	87 (21.8%)	400 (100.0%)	
Work/Employment	No	5 (1.3%)	150 (37.6%)	87 (21.8%)	70 (17.5%)	87 (21.8%)	399 (100.0%)	0.7992
	Yes	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)	
Total		5 (1.2%)	151 (37.8%)	87 (21.8%)	70 (17.5%)	87 (21.8%)	400 (100.0%)	
Health staff treatment …	No	5 1.3	147 37.8	86 22.1	67 17.2	84 21.6	389 100.0	0.7804
	Yes	0 (0.0%)	4 (36.4%)	1 (9.1%)	3 (27.3%)	3 (27.3%)	11 (100.0%)	
Total		5 (1.2%)	151 (37.8%)	87 (21.8%)	70 (17.5%)	87 (21.8%)	400 (100.0%)	

COMPARISON OF PROBLEMS RELATED VARIABLES AND REASONS PER PLACE OF DELIVERY

The table above show that there were significant difference in delivery site in terms of problems for attending antenatal care clinic among women interviewed in the district, where by 110 (27.7%) of women interviewed had problem for attending antenatal care (ANC) and 286 (72.2%) of women interviewed did not have problems for attending antenatal care. P-value 0.0001, with those citing problems attending ANC more likely to deliver at home without a TBA.

However, on regard of type of problems the results show that there are high home deliveries without traditional birth attendant (TBAs) assistance among women who had problems of money 37 (55.2%) and transport 50 (58.1%) and the least for problems due to family members or friends 8 (80%) and family responsibility 4 (40.0%) compared to all others. The other barriers do not show any significant difference across groups i.e. health staff treatment, work/employment and their P-values were greater than 0.005

Table 19:

Frequency distribution of Related Reasons/Barriers a woman had for getting to the Hospital or Clinics or TBAs

The problems a woman had getting to the hospital or clinic or TBAs in labour	Frequency	Percent
LABOUR STARTED SUDDENLY AND I GAVE BIRTH AT HOME.	2	1.0%
LACK OF MONEY	6	2.9%
LACK OF TRANSPORT	103	49.8%
LONG DISTANCE TO CLINIC	14	6.8%
MONEY AND TRANSPORT	80	38.6%
NOT APPLICABLE	1	0.5%
THE FAMILY DON'T LIKE TO GO TO THE CLINI	1	0.5%
Total	207	100.0%

The table above show the accessibility related reasons/barriers women interviewed had for getting to hospital, clinic or TBAs in labour. Whereby 103(49.8%) of women interviewed had transport problem, followed by 80(38.6%) of women had problem of lack of Money and Transport, 14(6.8%) of women faced long distance problem to Clinics, 6(2.9%) of women had problem of lack of Money, 2(1.0%) of women had problem of Labour which started suddenly and lastly 1(0.5%) of women their family didn't like to go to the clinic.

Table 20.

Distribution of reasons/barriers for not going for ANC clinic/booking earlier:

5.3 Why did you not go for antenatal care/booking earlier in your pregnancy?	Frequency	Percent
I did not know that I was pregnant/until I started to feel foetal movement.	74	34.7%
I was advised by friends to start to attend antenatal clinic at that time.	4	1.9%
I was busy/I was taking care for my father who was sick (family responsibility).	7	3.3%
Lack of Money and transport	7	3.3%
Long distance/I'm living far away from Clinic.	30	14.1%
My husband delayed to buy me a Ternity gown.	6	2.8%
The nurses are rude/has bad language	4	1.9%
To minimize frequency for attending antenatal clinic (ANC).	81	38.0%
Total	213	100.0%

ACCESSIBILITY RELATED REASONS/BARRIERS FOR NOT GOING FOR ANTENATAL CARE (ANC) CLINIC/BOOKING EARLIER.

The table above show that 81 (38.0%) of women interviewed explained that to minimize frequency for attending antenatal clinic (ANC) was the most reason/barrier for not going to ANC clinic/booking earlier, followed by 74 (34.7%) of women explained that they did not know that they were pregnant/until they started to feel foetal movement, 30 (14.1%) of women explained that long distance to clinic was a reason for not going to ANC clinic/booking earlier, 7(3.3%) of women explained that lack of money and transport and they were busy/ were taking care for their family who were sick(family responsibilities) were the reasons for not going to ANC clinic/booking earlier, 6(2.8%) of women explained that their husbands delayed to buy maternity gowns was a reason for not going to ANC clinic/booking earlier, lastly 4(1.9%) of women explained that they were advised by friends to start to attend antenatal clinic at that time as a reason for not going to ANC clinic/booking earlier, and 4(1.9%) of women explained that the nurses were rude/have bad language as a reason for not going to ANC clinic/booking earlier.

Table 21. Distribution of Reasons or Things that made it EASIER to attend ANC Clinic.

5.8 What sort of things or people made it EASIER to attend antenatal care? (Note: do not ask this question if mother did not attend ANC)	Frequency	Percent
FAMILY SUPPORT	149	37.6%
GOOD ATTITUDE OF STAFFS AT CLINIC.	1	0.3%
MONEY	15	3.8%
NOTHING AND NOBODY	47	11.9%
SHORT DISTANCE TO CLINIC	154	38.9%
TRANSPORT	30	7.6%
Total	396	100.0%

The table above show that 154 (38.9%)of women interviewed explained short distance to clinic was the most common reason for easier access to antenatal care (ANC) clinic, followed by 149 (37.6%) women explained that family support as the reasons for easier access to antenatal care (ANC) clinic, 47(11.9%) of women explained that nothing or nobody as the reasons for easier access to antenatal care (ANC) clinic, 30(7.6%) of women explained transport as the reason for easier access to antenatal care (ANC) clinic, 15(3.8%) of women explained that money as the reasons for easier access to antenatal care (ANC) clinic, and lastly 1(0.3%) of women explained that good attitude of staff at clinic as the reasons for easier access to antenatal care (ANC) clinic.

Table 22A:

Frequency Distribution of Reasons why a woman delivered at a particular place (Home-withTBAs/Without TBAs/Clinic/Hospital/) during last Birth.

Reason delivered in particular place during last birth	Frequency	Percent
Decision of the family	37	9.2%
Fear of to be Operated/ They do Episiotomy	1	0.2%
Fear to pay fine/be punished/	1	0.2%
I was not planned/Labour started suddenly/	50	12.5%
Lack of money/Transport/	19	4.8%
Long distance to Health centre/Could not get and afford facility	114	28.5%
Nurses are uncooperative.	1	0.2%
Short distance to Clinic/Health facility	12	3.0%
To get good help, advice/good service to save life/	151	37.8%
Traditional Birth Attendant (TBA) was near to my home compared to Health centre/I like TBAs	14	3.5%
Total	400	100.0%

REASONS FOR CHOOSING PLACE OF DELIVERY:

The table above show (the reasons) that 114(28.5%) of women interviewed especially for those who delivered at home their decisions for choosing place of delivery mostly were influenced by problems of long distance to health facility, followed by 50(12.5%) of women their decisions were due to labour which started suddenly and not planned, 37(9.2%) of women their decisions influenced by decisions made by family, 19 (4.8%) of women their decisions influenced by problem of lack of money/transport, 14 (3.5%) of women their decisions were due to short distance to Traditional Birth Attendant (TBAs) and they liked them, and lastly 1(0.2%) of women their decisions influenced by fear to be operated/they do episiotomy, and 1(0.2%) of women their decisions were due to nurses who were uncooperative. And for those who delivered at health facility their decisions mostly were influenced by good help/advice/service and save life 151(37.8%), followed by 12(3.0%) of women were influenced by short distance to health facility (clinic or hospital) and lastly 1(0.2%) of women were influenced by fear to pay fine/be punished

Table 22B:

Comparing Reasons why a woman delivered at a particular place (Birth before Arrival (BBA)/Home-withTBAs/Without TBAs/Clinic/Hospital/) during last Birth By Place of Delivery during last Birth

Acceptability Variable Related	PLACE OF DELIVERY					TOTAL	p-value 0.0000
	Birth Before Arrival (BBA)	Home without TBAs	Home with TBAs	Clinic	Hospital		
Decision of the family	0 (0.0)	19 (12.6)	15 (17.2)	1 (1.4)	2 (2.3)	**37 (9.3)**	
Fear of to be Operated/ They do Episiotomy	0 (0.0)	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	**1 (0.3)**	
Fear to pay fine/be punished/	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.4)	0 (0.0)	**1 (0.3)**	
I was not planned/Labour started suddenly/	2 (40.0)	35 (23.2)	11 (12.6)	2 (2.9)	0 (0.0)	**50 (12.5)**	
Lack of money/Transport/	0 (0.0)	11 (7.3)	8 (9.2)	0 (0.0)	0 (0.0)	**19 (4.8)**	
Long distance to Health center/Could not get and afford facility	3 (60.0)	79 (52.3)	31 (35.6)	1 (1.4)	0 (0.0)	**114 (28.5)**	
Nurses are uncooperative.	0 (0.0)	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	**1 (0.3)**	
Short distance to Clinic/Health facility	0 (0.0)	0 (0.0)	2 (2.3)	9 (12.9)	1 (1.1)	**12 (3.0)**	
To get good help/advice/good service to save life/	0 (0.0)	4 (2.6)	7 (8.0)	56 (80.0)	84 (96.6)	**151 (37.8)**	
Traditional Birth Attendant (TBA) was near to my home compared to Health center/I like TBAs	0 (0.0)	1 (0.7)	13 (14.9)	0 (0.0)	0 (0.0)	**14 (3.5)**	
TOTAL	**5 (100.0)**	**151 (100.0)**	**87 (100.0)**	**70 (100.0)**	**87 (100.0)**	**400 100.0**	

REASONS FOR CHOOSING PLACE OF DELIVERY:

The table above show that different factors/reasons women interviewed were influenced women to choose place of delivery. On regard to different factors by place of delivery, it was found that decision of the family as a factor influenced 37 (9.3%) of women to deliver at home in which 19(12.6%) of women delivered at home without assistance of TBAs and 15(17.2%) of women delivered at home with assistance of TBAs compared to health facility deliveries 3 (8.1%) in which 1 (1.4%) of woman delivered at clinic and 2(2.3%) of women delivered at hospital.

Labour started suddenly influenced 50(12.5%) of women interviewed to deliver at home in which 35 (23.2%) of women delivered at home without assistance of TBAs and 11(12.6%) of women delivered at home with assistance of TBAs and 2 (40.0%) delivered before arrival compared to health facility deliveries 2(2.9%) of women in which 2 (2.9%) of women delivered at clinic and no any woman delivered at hospital.

Lack of money/transport factor influenced 19 (4.8%) of women interviewed to deliver at home in which 11 (7.3%) of women delivered at home without assistance of TBAs and 8 (9.2%) of women delivered at home with assistance of TBAs and no any woman delivered before arrival compared to health facility deliveries 0 (0.0%) of women in which neither woman delivered at clinic nor hospital.

Problem of long distance to health facility factor influenced 114 (28.5%) of women to deliver at home in which 79 (52.3%) of women delivered at home without assistance of TBAs and 31(35.6%) of women delivered at home with assistance of TBAs and only 3 (60.0%) of women delivered before arrival compared to health facility deliveries 1 (1.4%) of woman in which 1(1.4%) of woman delivered at clinic and no any woman delivered at hospital.

Living near Traditional Birth Attendant (TBAs) and they liked them as a factor influenced 14 (3.5%) of women to deliver at home in which 13 (14.9%) of women delivered at home with assistance of TBAs and 1 (0.7%) of woman delivered at home without assistance of TBAs and no any woman delivered before arrival compared to health facility deliveries 0 (0.0%) in which neither woman delivered at clinic nor hospital.

also influenced home deliveries 1 (0.3%) of woman in which 1 (0.3%) of woman delivered at home without assistance of TBAs and none of woman delivered at home and before arrival with assistance of TBAs compared to health facility deliveries 0 (0.0%) of women in which neither woman delivered at clinic nor hospital.

To get good help/advice/service and save life as a factor influenced 151 (37.8%) of women to deliver at health facility in which 84 (96.6%) of women delivered at hospital and 56 (80.0%) of women delivered at clinic compared to home deliveries 11 (7.2%) of women in which 7 (8.0%) of women delivered at home with assistance of TBAs and 4 (2.6%) of women delivered at home without assistance of TBAs and no any woman delivered before arrival.

Short distance to health facilities influenced 12 (3.0%) of women to deliver at health facilities in which 9 (12.9%) of women delivered at clinics and 1 (1.1%) of woman delivered at hospital compared to home deliveries 2 (2.3%) of women in which 2 (2.3%) of women delivered at home with assistance of TBAs and none of woman delivered at home and before arrival without assistance of TBAs.

And lastly, fear to be operated, uncooperativeness of nurses, and fear to pay fine/be punished were cited by only 1 woman each.

These were coded answers to open-ended questions so no statistical testing was done on these essentially qualitative responses.

4.1 Conclusion.

From these results it show that socioecnomic factors and presence of traditional birth attendants during child birth play a role as determinants for women's decision making for place of delivery. These data correlate with findings of related studies done elsewhere in the world as we shall see in the next chapter of discussion

CHAPTER 5

5.1 DISCUSSION

This study discusses major findings on factors contributing to home delivery among women interviewed. The discussion will be revealed according to the study objectives and in relation to other similar studies conducted elsewhere. Home deliveries pose a threat not only to the mother but also to the newborn baby.

This study shows a highly prevalent home child delivery practice (60.9%) among Rungwe district women. Socioeconomic, knowledge, acceptability, accessibility constraints as well as poor quality of health services are the major reasons compelling pregnant women to give birth at home. The majority of home deliveries are assisted by unskilled attendants such as the pregnant woman herself or a close relative (i.e. mother, father, aunts and sisters) and to some extent by traditional birth attendant (TBAs). However, it shows a highly prevalent attendance of antenatal care clinic in all pregnancies across all divisions in the district.

Antenatal Clinic Attendance

In line with earlier annual Rungwe district reports, almost all women interviewed in this study attended ANC-Clinic during pregnancy (98.8%) also see table 7B. Findings of high attendance to ANC clinic also have been reported by previous study in Tanzania which is estimated to be 94% TDHS (2004-2005). The results of this study are complementary to

the emphasis on antenatal care by the Tanzanian national health policy, and a result of free provision of maternal and child health care services in accordance with Millennium Development Goal 5.TDHS.(2002)

Home Delivery:

Even though attendance to antenatal clinic (ANC) was high, however, home delivery among women interviewed in this study was also high 243 (60.8%) with only 157 (39.3%) delivered at health facilities. Surprisingly, this finding shows that most of the women interviewed confirmed having been informed about health facility as the right and safe place of child birth. Noteworthy is that the percentage of home child delivery in Rungwe district was much higher than that reported by the country where 53% deliver at home (TDHS, 2004-2005). Also the respective prevalence figure in Rungwe district is still higher than the World Health Organization (WHO) estimate for home child deliveries in the developing world 50% of the deliveries place in home WHO (1997). And is still higher than the UNPFA (1999) findings that show that in Sub-Saharan Africa, where an estimated 40-50% of women deliver at home. Furthermore another study in Rakai district Uganda show that 44.5% of deliveries take place in home. Also Kaguna et al (2000) discovered that in Rakai district of Uganda, 32% of the sample population used public health facilities, while 68% delivered at home. WHO (1997) reported that in southern Sahara “less than 50% of women have access to skilled attendants, and only 36% give birth in health facilities” In Egypt there are also home delivery rates of over 50% (ENMMS, 2000).

Why women do not use available services

Over the years, scholars from various parts of the world have attempted to find out why women, especially those in developing countries seem to avoid using health facilities for child delivery. Various reasons are perceived to prevent women in low-income countries from seeking skilled care during labour, including midwives' attitudes, lack of confidence in services offered, socioeconomic conditions, as well as cultural beliefs and traditions (Hodgkin 1996, Van den Heuvel, De Mey, Buddingh, & Bots 1996). These findings correlate with the findings of Rungwe district. In Rungwe district the results show that there were similarities and differences in terms of socioeconomic/demographic and knowledge factors for place of delivery across all four divisions in the district. And home child delivery rate was higher in those divisions which were most poorly resourced. This especially was found in Pakati and Busokelo divisions than the other two divisions in the district.

Among the reasons that compel women from using health facilities are:

High costs for child birth services: Even when formal fees are low or non-existent, women often face expenses for transport, drugs, and food or lodging for the women or her family members. As a result most of poorer and rural women lack access to good quality health services during pregnancy and child birth Abouzahr C. (1997). This finding shows a relationship with our study findings where by in Rungwe district about 4.8% could not afford seek child birth care during delivery, and 16.46% could not afford to attend antenatal care services due to lack of money. In Rungwe, results show that women

with economic problems particularly in Pakati and Busokelo divisions had a higher rate of home delivery than those who had less or no economic problems. Also, it found that some women had to pay more money during for seeking child birth services. Also, in Rungwe district the level of awareness on facilities delivery is high, however factors like travel time and added costs at the time of delivery force women to deliver at home as seen in table 5. In this study shows that most women delivered at home with less cost compared to those who delivered at health facilities.

Although, the health policy of Tanzania is to provide free obstetric services in all public health institutions, the reality is that there are many costs that individual woman and their family have to incur due to routine stock-outs at health facilities. Hence, women were regularly directed by health workers to purchase and bring essential medical supplies. These costs among other cost were cost of gloves and suture materials, rubber mate, but the most important is transport and cost of transport to health facilities (PHSDP – MMAM 2007-2017 May, 2007). In addition, in a cohort study Hodgkin (1996) cited to family's economy as factors that mitigate against women seeking services in health centres.

Lack of physical access: Among other reasons that compel women from seeking health facilities services is lack of physical access. Most rural women (80%) live more than five kilometres from the nearest hospital. Vehicle shortage and poor road conditions mean that walking is often the main mode of transportation, even for women in labour. Thus poorer and rural women lack access to good quality health services during pregnancy and

child birth Abouzahr (1997). This finding shows a relationship with the results of Rungwe district where by women from Pakati and Busokelo divisions are found to travel for long time and long distance to health facility especially hospital by mean of walking. In addition, Biego G. et al (1995) point out that in rural Tanzania, 84% of women who gave birth at home intended to deliver at health facility, but could not because of distance and transport. Furthermore, in Tanzania the under funding of the health sector has undermined the health infrastructure across the country. The inputs to the sector in terms of equipments, transport and communication remain insufficient (PHSDP – MMAM 2007-2017 May, 2007). In addition, the results of TDHS (2004) which reported that major barriers perceived by women to access delivery health services include lack of money (40%), long distance to health facility (38%), lack of transport (37%) and unfriendly services (14%). The high rates of home deliveries are also attributed by poor geographical access to health facilities, lack of functioning referral system, inadequate capacity at health facilities in terms of space, skilled attendants, commodities and other socio-cultural aspects surrounding the pregnant women. The variations between the studies and the current study can be explained in many ways such as the distribution of health facilities in the district and level of knowledge among the respondents just to mention but a few.

Poor information: This is another reason that make women to turn away from health facilities utilization where by the women and community members do not know how to recognise, prevent or treat pregnancy complications or when and where to seek medical help (Abouzahr 1997). In Rungwe district the level of awareness on facilities delivery is

high, but factors like travel time and added costs at the time of delivery compel women to deliver at home.

Health services are inadequate: Poor quality of care is one of the most common reasons women give for choosing not to use available maternal health services. Problems include that health facilities in developing countries face chronic shortage of equipment, drugs and basic supplies, including blood for transfusion. Families of women in labour may be forced to purchase drugs and supplies to bring to the hospital, which in turn can cause fatal delays (Abouzahr 1996). The author adds that health facility staffs are often poorly trained. They may lack essential clinical skills, and may not observe hygienic practices. Health workers may be rude, unsympathetic and uncaring. Likewise to the Rungwe results show that women could not use the health facilities due to poor services. Some confirmed uncooperativeness of health workers, some confirmed lack of drugs in some health facilities. This also reflects to poor referral system for complicated cases as Fawcus S. et al (1996) also explain that delays in referring women from community health facilities to hospitals are one of the most important barriers to life-saving maternal care. Generally, in Tanzania the performance of the health sector has been negatively affected by limited resources which have led to an unsatisfactory quality of health care provision at all levels PHSDP – MMAM 2007-2017 (May, 2007)

Cultural preference: From our study results, in Rungwe cultural factors were not a predictor of place of delivery. This result does not correlate with the results of other

scholars such as Abouzahr (1997) who explains that formal health services can conflict with ideas about what is normal and acceptable including preferences for privacy, modesty and female attendants. Also, Leslie J. and Gupta G. R. (1989) explain that the Saraguro Indians in Ecuador turn away from affordable, accessible maternity care because they feel that hospitals violate women's privacy during childbirth and because many health provider are men. Also presence of traditional birth attendants as Chipfakacha et al (1994) reported in his study that the presence of traditional birth attendants also discourage the use of health care facilities

Lack of decision making: The results from Rungwe show that some women could not use the health facility during childbirth simply because the family did not like to the health facility. This result correlates with the findings of other scholars such as Abourzahr (1997) explain that "in many parts of the world, women's power to make decision is limited, even over matters directly related to their own health." Also safe motherhood (1997) point out that "in Bangladesh, it is usually the mother-in-law and husband who make the decision to seek (or not seek) care. They are often the least likely to know about pregnancy-related complications and their possible fatal consequences" Additional factors include gender inequalities in decision making and access to resources at household level (TDHS 2004-2005).

Acceptability of services delivered.

Women's perceptions and experiences of staff and services at health facilities/home-with TBAs and without TBAs were mixed. Some women related having a good experience

during delivery at health facility/home with TBAs and others were appreciative of the medical care/TBAs and support they received from medical staff or TBAs and would recommend to other women. However, some of them reported unprofessional, inappropriate and unethical attitude and actions by health workers were commonplace. For example, women explained uncooperativeness of nurses i.e. they were calling out for assistance but being left alone to deliver, being refused services if they did not come with the right medical supplies, being told they were dirty or their clothes were old, or being slapped during child birth. As a consequence of abusive treatment, some women were discouraged from using health facilities and would not recommend to other women and instead they opted to go to traditional birth attendants (TBAs) Abourzahr (1997). As found in this study the results show that home deliveries were higher among those women whose family stayed with them throughout during their labour and child birth than health facility deliveries where they were alone during their labour and child birth.

Accessibility to delivery service centres - Distance and Transport

Another compelling factor for home delivery was distance from home to health facility as see table 19 and 22. According to TDHS (2004) it is estimated that over 80% of the Tanzanian population live within 5km from the health facility. However, the distribution of health facilities in the country is not equitable; some women walk up 4 hours to health facilities while others walk less as found in our district especially in Pakati and Busokelo divisions women walk between one hour up to 6 hours see table 4, 5 and figure 4.

In Rungwe district there are some areas with physical barriers to an existing facilities though it may be within 5 kilometers of the population centre. The geographical barriers include rivers, lakes, bad roads, valleys and mountains. This study has similar findings to other author's studies. For example Kibambai (2002) noted that the influence of distance can not be underscored, studies done in Cuba, Egypt, Indonesia, Jamaica and Turkey on maternal mortality, demonstrated that maternal complications are increased in areas where women are likely to arrive in hospitals late, in a serious condition. World Health Organization (WHO) (1986) mentions distance to health facility and inadequate action by medical personnel to be a contributory factor to home delivery. And, Godfrey et al (1996) explained that among reasons given by mothers for not delivering in health units was distance to the health facilities. In addition to distance, sudden onset of labour was another major factor for home delivery in this particular study.

On the other hand those women who delivered in health facilities mentioned that good care of the mother and the child, failure to deliver at home among others were the reasons as seen in the result of this study in table 14, 19 and 22. Other reasons were due to short distance to health facilities, having good resources, easier transport and absence of any other problems for accessing at health facilities.

Accessibility and Acceptability factor for Traditional Birth Attendant (TBAs).

In this study it was found that traditional birth attendants were among factors contributing to home deliveries. The study results show that women interviewed were knowledgeable about risk factors during pregnant and there was high attendance to antenatal care (ANC).

However, home deliveries still were high compared to health facilities deliveries. This was due to that women lived short distance away from TBAs compared to health facilities and they thought that traditional birth attendant conducted normal delivery services as nurses and were less expensive and they liked them. These findings correlate to the ENMMS (2000) cited in *Clean and Safe Mother Birth* (2005) reported that Egypt has a home delivery rate of over 50%. Among reasons for choosing home delivery was trust in dayas (traditional birth attendants). Also it found in this study that among other factors that were influencing home delivery with TBAs or even without TBAs where unfriendly services by medical staff, inadequate supplies and drugs in health facilities, formal and informal charges incurred for deliveries at health facilities, and decision made by individual/family.

5.2 Study limitations

A limitation of this analysis was the lack of adjustment for any clustering effect which may have been present due to our sampling design. This was due to limited statistical capacity of the student who is located in a rural area of Tanzania without access to advanced statistical software. The potential decrease in precision due to cluster effect was analysed by the supervisor and found to be approximately 3-5% (e.g. adjusted confidence interval would be 3-5% wider). In addition a statistician was consulted who felt in agreement with the supervisor that considering the strength of the associations seen (most significant p-values were <0.001) it is unlikely that a change in inference and conclusions would be expected given this level of estimated change in precision (personal communication, Professor R. Madsen, UWC/Univ. Missouri). Another statistical

consideration was the need for potential weighting of estimates. This would have been necessary if there were large differences in the proportion of the population that each woman represented across stratum or clusters. Our population estimates suggest that the women in the study represented a relatively consistent number of women in the population and that weighting of estimates would not have appreciably changed our estimates or conclusions.

In this study the researcher was a very new person in the rural setting, although the questionnaires were translated into national language (Kiswahili) and also being a male medical doctor; some of women interviewed might be afraid to disclose their family affaires. Also, some women interviewed may had forgotten some of the events happened long years ago. i.e. a mother of para eight might had difficulty to remember what happened in her earlier pregancies.

5.3 CONCLUSION:

In view of results and discussion it is feasible to conclude that although ANC attendance was revealed to be high, the majority of women have home deliveries. Most of the women were aware of maternal risks during pregnancy as seen in table 10. However socioeconomic factors, and less or lack of knowledge on danger signs, are among the factors that compel women from health facility utilization. Also long distance, lack of transport to travel to health facility and cost of service influence them to deliver at home. Furthermore, women lack education on key elements on birth preparedness, as most of them complain of sudden onset of labour. Poor quality of health care services in health facilities are among the factors that contributes women to decide or not to use the facilities. This have been cited several times by participants for instance lack of drugs and supplies, Uncooperativeness of health staff influenced under utilization of health care facilities.

Other social factors that compel to deliver at home are wrong advice from friends, relatives, presence of TBAs whom they liked/trusted, and self preference. In addition, in the majority relatives were mentioned to assist deliveries at home, while self deliveries also existed due to experience as perceived by themselves. Functioning health facilities are needed, staffed by trained health workers, equipped with essential medical supplies and able to provide rapid referrals for women with obstetric complications. Actions are required now to improve health care delivery, focussed on the most underserved areas, informed by the experiences of women and health workers and by Tanzanian best practice. Most Tanzanians live within 5km of a clinic, however still some suffer from living far away to health facilities. Due to geographical barriers and difficulties for the

sick and pregnant women to cover such a distance when services are needed, more facilities are still required. With strong social and political will and strategic decision-making at all levels, maternal mortality and morbidity in Rungwe as well as Tanzania as a whole can be dramatically reduced.

5.4 RECOMMENDATIONS.

At a community level:

- The community with support from the CHMT's should establish a suitable referral system linked to health facilities with reproductive and child health services. For instance, 24 hours emergency transport services must be available within each community for emergency obstetric and paediatric care. This is critical in both rural areas (where other forms of public transport are often not available and where many people do not have access to private vehicles) and in urban areas where wellbeing is compromised if travelling alone.
- Community participation on raising awareness on child reproductive health among community members should be designed and enforced, thus, this will raise positive attitude towards health facilities delivery. Community education about maternal and infant health and danger signs is crucial. Families should be educated on maternal and infant health and danger signs and they should also know that on time medical attention can save lives. At the same time as women had some knowledge on danger signs this was deficient. It is known that women trust most the information from health facility based health providers. Therefore it is very important that health provides are active participants in health education

and health promotion. It is also important that health education and promotion be comprehensive to include common symptoms of pregnancy, recognising risk factors that need urgent treatment.

- Cooperation and communication with families and communities needs to be enhanced. It was clear that communities and families are an untapped resource for promoting maternal and infant health. In our result showed that families want to be more involved in the care of women during pregnancy and birth. Enhancing community support for antenatal care (ANC) and postnatal/infant services may be one of the most beneficial ways to increase use of maternal and newborn services. While essentially all women interviewed attended ANC and hospital delivery but home delivery was high than facilities deliveries. There appeared to be a gap in coordination and communication with families and communities. Initiatives like better births that promote family involvement during labour and birth and expansion of these efforts to primary care should be supported.

At level of Council Health management Teams (CHMTs):

- Need to establish a technical support to be able to carry out evidence-based planning for maternal Health.
- Need to establish a clearly identified budget to implement maternal health interventions.
- Health education; health education interventions to communities should have to be designed that will focus on advising health facility delivery.

- Health staff capacity building such as sensitivity training for hospital staffs working with mothers and infants and training on early detection of risk factors during pregnancy, health promotion, and proper calculation of expected date of deliveries (EDDs) as well as early referral of complicated cases should be explored and communication with families needs to be enhanced. All families in the district and elsewhere in the country have the right to be treated with respect when they present at the health facility. And also ought to have full knowledge of the diagnosis and treatment for themselves and their infants
- Quality of assurance; adequate provision of delivery equipment and obstetric drugs should be given considerable attention. All facilities must be adequately supplied with the essential medicines and other supplies to promote maternal and infant health. Officials and staff responsible for supplies must be held directly accountable for their actions to ensure regular flow of supplies. Improvement in infrastructure, equipment and supply chains at health facility are essential for enabling delivery of quality delivery care. Improvements can also positively impact the morale and performance of health workers as well as the confidence of women in utilizing facilities.
- Expand Coverage of Comprehensive Emergency Obstetric Care (EmOC) to all district hospitals (at dispensaries, health centers and hospitals respectively) with priority to the most underserved areas. Equip all dispensaries and the remaining health centers to provide basic EmOC.
- CHMTs and council authorities should ensure that health service providers including TBAs, VHWs, and CBDs are provided with basic supplies and

equipment for provision of quality reproductive child health (RCH) services. Also should recruit and deploy trained health personnel to expand coverage of skilled birth attendance in underserved areas. Quality services are dependent on skilled professionals. Substantial and sustainable improvements in maternal health services can only be achieved by deploying more trained staff with priority on expanding coverage in underserved areas.

- Research; more research need to be designed and conducted about why home delivery is high in this district especially in Pakati and Busokelo divisions and other districts of the region.

At National level:

- Budgets need to have money specifically earmarked for maternal health interventions
- Disseminate, implement and enforce nationally the government policy exempting women from paying for maternity care. Women and their families need to know their right to free pregnancy and delivery services, and health workers and local authorities need to know and effectively implement the policies. With this in place, maternal health services will be provided without charge (both official and unofficial fees) and no pregnant women should be denied care. All delivery supplies must be also provided to women free of charge, consistent with the government statement that no pregnant woman should have to provide a delivery kit for childbirth.

- Yet the government in collaboration with private sector, not-for- profit organizations, and international organizations, should continue to provide free health care to pregnant women, family planning clients and children under five years for solving financial constraint.
- Need to strengthen the management capacity of CHMT's to establish and sustain quality reproductive and child health services.
- Incorporate a systemic role-out strategy of basic and comprehensive emergency obstetric care to meet the national road map strategic plan to accelerate reduction of Maternal, Newborn and Child Deaths in Tanzania.

What further can be done?

Governments and non-governmental agencies must expand services, improve their quality, and tailor them to meet the needs of women and communities by:

Ensuring that health facilities are located close to where women live, have an adequate number of trained staff, a continuous supply of drugs and equipment, and are linked to hospitals by an emergency transport and referral system.

Enforcing standards and protocols for service delivery, management and supervision, and using them to monitor and evaluate the quality of services, along with feedback from clients and health providers.

Providing free or affordable maternal and infant health services that can manage any complications as well as offer routine care.

Educating women and communities about the importance of maternal health and appropriate services.

Utilization of health facilities by women can be increased by improving the quality of existing maternal health services which is the quickest, most cost-effective way to save women's lives good quality care aims to:

Meet Women's Needs:

Services should be provided in health facilities that are as close as possible to where women live and that can provide the services safely and effectively;

Services should be sensitive to cultural and social norms, such as preferences for privacy, confidentiality and care by female health workers;

Staff should be respectful, non-judgmental and responsive to clients;

Women should be treated as active participants in their own health, and offered information and counselling so they can make informed decisions about their health and treatment.

Provide Technical Competence:

Staff members should be trained in technical, clinical, management, and interpersonal skills;

Standards of care and written protocols should be available;

Physical facilities should be adequate, clean and convenient;

Necessary drugs, equipment and supplies should be available;

Comprehensive reproductive health services (including follow up care) should be available on-site or through established linkages to other health facilities;

A fully functional referral and transport system should exist between all levels of care (home/community, health centres, and district/regional hospitals).

References:

Abreu and Potter (2001) *Essential Obstetric Care.* Available in: http://www.rho.org/html/sm-b-04.html#abreu01.

AbouZahr C., "Improve Access to Quality Maternal Health Services". Presentation at Safe Motherhood Consultation in Sri Lanka, 18–23 October 1997.

ACCESS (2004). *Preliminary findings of ACCESS project.* Ifakara, Tanzania: Ifakara Health & Research Development Centre (IHRDC). Unpublished. (Quoted in Msecha & Mtega, 2005).

Ackermann-Liebrich U, Vogeli T, Gunter-Witt K (1996) Zurich study team: home *vs.* hospital deliveries: follow-up study of matched pairs for procedures and outcomes. *BMJ* 313, 1313-1318.

Adapesa M. S.(2007) Household decision making about the use of maternity services in Builsa District, Ghana Available in: http://pubhealth.ku.dk/mih_en/studguide/job/postdoctoral_research_fellowship [accessed in 2007]

Afful T.M (20097) Safe Deliveries In Kassena-Nankana District In Northern Ghana: A Study To Determine Factors Influencing The Use Of Health Facilities For Deliveries By Pregnant Women Available in: http://pubhealth.ku.dk/mih_en/studguide/job/postdoctoral_research_fellowship [accessed in 2007]

Amos, M. N. (2003) *Community-Based study on pattern and determinants of maternal services utilization in Karagwe district in Tanzania*. Available in: http://pubhealth.ku.dk/mih_en/thesesAbstr/04/

Ammoti Kaguna, B., & Nuwaha, F. (2000) Factors influencing choice of deliveries sites in Rakai district of Uganda. *Social Science & Medicine*, 50: 203-215

Beaglehole, R., Bonita, R. & Kjellstrom, T. (1997). Ch 3 – Types of study. In *Basic Epidemiology*. Geneva: WHO Publications: 31-53.

Bergström and Goodburn (2001). In *Skilled attendance during pregnancy and delivery.* Available in: http://www.rho.org/html/sm-b-04.html#bergstrom01

Biego G. Cutis S., Raggers H, Kapiga S & Ngallaba S, *Survey on Adult and Childhood Mortality, Tanzania*. Macro International, Calverton, MD, 1995.

Bicego G., Cutis S., Raggers H, Kapiga S & Ngallaba S (1997) *Sumve survey on adult and childhood mortality, Tanzania, 1995: in-depth study on estimating adult and childhood mortality in settings of high adult mortality. Feb 1997.* xii, 92pp. Macro International, Demographic and Health Surveys [DHS]: Calverton, Maryland

Bolam A, Manandhar DS, Shrestha P, Elis M, Malla K & Costello A (1998) Factors affecting home delivery in the Kathmandu Valley, Nepal. *Health Policy and Planning* 13, 152-158.

Borghi et al. (2003). In *Skilled attendance during pregnancy and delivery*. Available in: http://www.rho.org/html/sm-b-04.html#borghi03

Bulterys et al. (2002). In *Skilled attendance during pregnancy and delivery*. Available in: http://www.rho.org/html/sm-b-04.html#bultreys02

Bureau of Statistics [Tanzania] and Macro Inc (2004-05) *Tanzania Demographic and Health Survey (2004-2005)* Macro International Inc. Calrerton, Maryland.

Brieger W. R., Luchok, Eng E., & Earp J. A. (1994) Use of maternity services by pregnant women in a small Nigerian community. *Health care for women international,* 15:101-110.

Chipfakacha, V. (1994) Attitudes of women towards traditional midwives- a survey in the Kgalagadi (Kalahari) region. South *African medical Journal*, 84:30-32.

Clean and Safe Home birth (2005) standards of practice for Integrated MCH/RH services

D'Ambruoso L, Abbey M & Hussein J (2002) Please understand when I cry out in pain: women's accounts of maternity services during labour and delivery in Ghana. *BMC Public Health 5*, 140

De Brouwere, V., & Lerberghe, W. V. (Eds). (2001). *Safe motherhood strategies: A review of the evidence.* Antwerpen, Belgium: ITGPRESS

District medical officer (2004) HMIS report Rungwe District medical officer.

Elo IT (1992) Utilization of maternal health-care services in Peru: the roles of women's education. *Health Transition Review* 2, 49-69

Ensor T, Cooper S. Overcoming barriers to health service access: influencing the demand side. *Health Policy Plan* 2004 Mar, 19(2):69-79.

Family care International and safe motherhood inter-Agency Group (1998) *Safe motherhood.* Available in: http://safemotherhood.org/facts_and_figures/measuring_progress.htm.

Filippi et al. (2003); Weeks et al. (2003); Wagaarachchi et al. (2001). In *Essential Obstetric Care.* Available in: http://www.rho.org/html/sm-b-04.html#filippi03,#weeks03,#wagaarachchi01

Flinders University of South Australia (2006) Health System Research II *Module guides.* - Flinders University, Adelaide, Australia: 17-145.

Ganer P., Lai D & Baea M (1994) childbirth in rural areas: maternal deaths, village deliveries and obstetric service use. *PNG Medical Journal 37, 166-172.*

Gilson, L. (1997) the lesson of user-fee experience in Africa. *Health policy Planning*, 12:273-285.

Gill and Ahmed (2004); Djan et al. (1997); Ifenne et al. (1997); Leigh et al. (1997); Mbaruku and Bergstrom (1995). In *Essential Obstetric Care*. Available in: http://www.rho.org/html/sm-b-04.html#gill04;#djan97;#ifenne97;#leigh97

Margaret G. S. (1996) The female client and the health care provider; intention to deliver and delivery outcome: 1-6.

Gohou et al. (2004); Stekelenburg and Roosmalen (2002). In *Essential Obstetric Care.* Available in: http://www.rho.org/html/sm-b-04.html#gohou04;#stekelenburg02.

Goldman and Glei (2003); Goodburn et al. (2000); Hoff (1997); Kamal (1998). In *Skilled attendance during pregnancy and delivery*. Available in: http://www.rho.org/html/sm-b-04.html#goldman03

Hedges, B. (1978) Ch 4 – Sampling. In G. Hoinville & R. Jowell (Eds). *Survey Research Practice.* London: Heinemann: 55-89.

Hodgkin, D. (1996) Household characteristics affecting where mothers deliver in rural Kenya. *Health Econ*. 5, 4:333-340.

Hodnett ED, Gates S, Hofmeyr GJ and Sakala C (2003) continous support for women during childbirth. *Cochrane Database of Systematic Reviews 2003*, Issue 3. Art. No.:CD003766.DOI: 10.1002/14651858.CD003766.

Hoque, A.., & Selwyn, B. J. (1996) Birth practice patterns in urban Slums of Dhaka, Bangladesh. *Womens Health,* 24 1:41-58.

Odoi-Agyarko H., Dollimore N., Owusu-Argyei O., (1993)."Risk Factors in Maternal Mortality: A Community-Based Study in Kassena Nankani District". Paper presented at the National Consultative Meeting on Safe Motherhood, Accra, Ghana,

J. Leslie and G.R. Gupta, *Utilization of Formal Services for Maternal Nutrition and Health Care.* International Center for Research on Women, Washington, DC, February 1989.

Katzenellenbogen, J. M., Joubert, G., Abdool Karim, S. S. (1997) Ch 8-Sampling. In *Epidemiology*: *A Manual for South Africa*. Cape Town: Oxford University Press: 74-82.

Lankinen, K. S., Bergstrom, S., Makela, P. H., & Peltomaa, M. (Eds.) (1994) *Health and disease in developing countries*. Hong Kong: The MacMillian Press Ltd.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer Publishing co.

Maimbolwa et al. (2003). In *Skilled attendance during pregnancy and delivery*. Available in: http://www.rho.org/html/sm-b-04.html#maimbolwa03

Maine et al. (1996); Figa-Talamanca (1996). In *Essential Obstetric Care*. Available in: http://www.rho.org/html/sm-b-04.html#maine97;#figa96

Mbeya Region Medical officer's three year report (2006-2008) HMIS report

McCord and Chowdhury (2003). In *Essential Obstetric Care*. Available in: http://www.rho.org/html/sm-b-04.html#mccord01

Mavalankar (2002). In *Essential Obstetric Care*. Available in: http://www.rho.org/html/sm-b-04.html#mavalankar02.

Mliga G R., Mwakilasa AO, Mwakalukwa E, (2005). *Human Resources for Health: Strategies to overcome the constraint.* Pre-Review Health SWAP Committee (Joint GOVT/Development Partners) Preparatory Meeting, Belinda Ocean Resort 15-17 March.

Nahar, S. & Costello, A. (1998) the hidden cost of "free" maternity care in Dhaka, Bangladesh. *Health Policy and Planning*, 13:417-422.

Nirupan and Yuster (1995); Barnes-Josiah et al. (1998) In *Essential Obstetric Care*. Available in: http://www.rho.org/html/sm-b-04.html#niru95;#barnes98.

Nwakoby BN (1994) Use of obstetric services in rural Nigeria. *Journal of Royal Society of Health* 114, 132-136.

Opuko, S. A., Kyei-Faried, S., Twum, S., Djan, J., Browne, E., & Bonney, J. (1997) Community Education to improve utilization of emergency Obstetric services in Ghana. The Kumasi PMM Team. *International Journal of Gynaecology and Obstetrics,* 59, suppl 2: 201-207.

Paul and Rumsey (2002). In *Skilled attendance during pregnancy and delivery*. Available in: http://www.rho.org/html/sm-b-04.html#paul02

Polit, D. E. & Hungler, B. P. (1993) Ch 5 – The Ethical Context of Nursing Research. In *Essentials of Nursing Research: Methods, Appraisals, and Utilization*. Philadelphia: J. B. Lippincott Company: 125 – 147.

Ministry of Health and Social Well Fare (2007) Primary Health Services Development Programme PHSDP – MMAM 2007-2017: xi-11

Raghupathy S. Education and the use of maternal health care in Thailand. *Soc Sci Med* 1996 Aug; 43(4):459-71.

Ray and Salihu (2004), Minden and Levitt (1996); and Bolam et al. (1999). In *Skilled attendance during pregnancy and delivery*. Available in: http://www.rho.org/html/sm-b-04.html#ray04

The United Republic of Tanzania (2005) *The Tanzania Poverty and Human Development Report* 1:37-40

Rice, P.R. & Ezzy, D. (1999) Sampling Strategy for Qualitative Research. In *Qualitative Research Methods – A Health focus*. Sydney: Oxford University Press: 40-50.

Roosmalen JV, Walraven G, and Stekelenburg J & Massawe S (2005) Editorial: integrating continous support of the traditional birth attendant into obstetric care by skilled midwives and doctors: cost-effective strategy to reduce perinatal mortality and unneccessary obstetric interventions. *Tropical Medicine and International Health* 10, 393-394

Samizi G, Pendo (1997). *Factors cntributing to late booking in Kasulu district, Kigoma Region-Tanzania. Primary Health Care Institute of Iringa City*. Masters Thesis 1997.

S. Fawcus *et al.*, A Community-based Investigation of Avoidable Factors for Maternal Mortality in Zimbabwe. *Studies in Family Planning*, Vol. 27, No. 6, November – December 1996.

Sibley, Sipe and Koblinsky (2004) In *Skilled attendance during pregnancy and delivery.* Available in: http://www.rho.org/html/sm-b-04.html#sibley04

Sorensen HT, Steffensen FH, Rothman KJ *et al.* (2000) Effect of home and hospital delivery on long term cognitive function. *Epidemiology* 11, 706-708

Thind A, Banerjee K.(2004) Home deliveries in Indonesia: who provide assistance? *J Community Health.* 2004 Aug; 29: 285-303.

Tlebere P, Jackson D, Loveday M, Matizirofa L, Mbombo N, Doherty T, Treger L, Wigton A, Chopra M. (2007) Community Based Situation Analysis of Maternal and Neonatal Follow-Up Care in South Africa. *Journal of Midwifery & Women's Health.* 52:342-350.

Toan, N. V. (2001) *Utilization of health services in a transitional society: Studies in Vietnam 1991-1999*. Medical dissertation. Division of International Health (IHCAR) and Department of Public Health Sciences, Karolinska Institutet, Stockholm

Varkevisser, C. M., Pathmanathan, I. & Brownlee, A. (1991) *Designing and conducting health system research projects. Health systems research training series,* 2. Ottawa: International development research centre.

Wagle RR, Sabroe S & Nielsen BB (2004) Socioeconomic and physical distance to the maternity hospital as predictors for place of delivery: an observation study from Nepal. *BMC Pregnancy and Childbirth* 4, 8

Walker, D., McDermott, J., Fox-Ruby, J., Tanjung, M. Nadjib, M., Widiatmoko, D. et al (2002) an economic analysis of midwifery training programmes in South Kalimantan, Indonesia. *Bull World Health Organ,* 80, 1:47-55.

Walraven GE, Mkanje RJ, Roosmalen J, van Dongen PW, Dolmans WM (1995) Perinatal mortality in home births in rural Tanzania. *European Journal of Obstetrics, Gynecology, and Reproductive Biology* 58,131-134.

World Health Organisation (1996). *Essential Obstetric Care*. Available in: http://www.rho.org/html/sm-b-04.html#who96

World Health Organisation (1997) *Coverage Maternity Care. A list of available Information* 4th Edition. Geneva, WHO, 15.

Yanagiswa S, Oum S & Wakai S (2006) Determinants of skilled birth attendance in rural Cambodia. *Tropical Medicine and International Health* 11, 238-251

HALMASHAURI YA WILAYA YA RUNGWE.

Simu: 2552225/2552082

Fax: 2552586

Ofisi ya Mkurugenzi Mtendaji Wilaya
S.L.P. 148
TUKUYU.

Unapojibu tafadhali taja:
Kumb. Na. RDC/T4/4/74

18/07/2007

Kwa yeyote anayehusika.

YAH:- DR. ALLY SADIK UREDI.

Tafadhali husika na kichwa cha somo letu.

Mtajwa hapo juu ni Daktari katika Hospitali ya Mkoa wa Mbeya. Kwa sasa yuko masomoni Chuo Kikuu cha Western Cape Town Afrika ya Kusini.

Amekuja kufanya utafiti kuhusu Uzazi wa Akina Mama na kupata sababu mbalimbali zinazopelekea Akina Mama kujifungulia majumbani.

Utafiti huo ataufanya katika Wilaya ya Rungwe. Hivyo apewe msaada na ushirikiano wa karibu sana ili kuweza kufanikisha kazi hiyo katika maeneo yenu.

(M.E.M. Buliga)
MKURUGENZI MTENDAJI WILAYA
RUNGWE.

Nakala Kwa:- Katibu Tawala Wilaya
S.L.P. 34
Tukuyu.

`` `` Mganga Mkuu Wilaya
S.L.P. 38
Tukuyu.

`` `` Maafisa Tarafa
Tukuyu Mjini; Pakati;
Busokelo na Ukukwe.

`` `` Katibu Tawala Mkoa
S.L.P. 754
Mbeya. – Aione Mshauri wa Afya Sekretarieti ya Mkoa Mbeya. Barua yako Kumb. Na. RMO/E.10/8/123 ya tarehe 17 Julai; 2007 yahusika.

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA WAZIRI MKUU
TAWALA ZA MIKOA NA SERIKALI ZA MITAA

OFISI YA AFISA TARAFA,
TARAFA YA TUKUYU MJINI,
S.L.P. 34,
TUKUYU

KUMB. NA. TTH/1/38/1

25 JULAI, 2007.

MAAFISA WATENDAJI,
KATA YA BULYAGA NA BAGAMOYO.

YAH: DR. ALLY SADIK UREDI

Kichwa cha habari hapo juu chahusika sana.

Nimepokea barua yenye Kumb. Na. RDO/TA/4/74 kutoka kwa Mkurugenzi Mtendaji Wilaya ikimtambulisha mtajwa hapo juu kuwa ni Daktari katika Hospitali ya Mkoa Mbeya amekuja kufanya utafiti kuhusu Uzazi wa akina Mama kujifungulia Majumbani.

Utafiti huo atafanya katika Vitongoji vya K[illegible]/Juu na Kawetere Chini kwa Kata ya Bagamoyo na Igamba, Bulyaga/Kati kwa Kata ya Bulyaga.

Hivyo mpeni ushirikiano ili aweze kufanikisha utafiti huo.

G.E. MWAKABUMBE
AFISA TARAFA
TUKUYU MJINI.

KATIBU TARAFA
TUKUYU MJINI
RUNGWE

Nakala: Katibu Tawala Wilaya,
RUNGWE.

" Mganga Mkuu Wilaya,
RUNGWE.

" Mkurugenzi Mtendaji (W),
RUNGWE.

" Dr. Ally Sadik Uredi.

JAMHURI WA MUUNGANO WA TANZANIA
OFISI YA WAZIRI MKUU
TAWALA ZA MIKOA NA SERIKALI ZA MITAA.

OFISI YA AFISA TARAFA,
TARAFA YA BUSOKELO,
S. L. P. 34,
TUKUYU.

3/08/2007.

Unapojibu tafadhali taja.
Kumb. Na. BD/GEN/32/VOL. 11
Kwa yeyote anayehusika,

YAH: DR. ALLY SADIK UREDI.

Tafadhali husika na kichwa cha habari hapo juu.
Mtajwa hapo juu ni Daktari katika Hospitali ya Mkoa wa Mbeya. Kwa sasa yuko masomoni Chuo Kikuu cha Western Cape Town Afrika ya Kusini.

Amekuja kufanya utafiti kuhusu uzazi wa akina mama na kupata sababu mbalimbali zinazopelekea akina mama kujifungulia majumbani.

Utafiti huo ataufanya katika Tarafa ya Busokelo. Hivyo apewe msaada na ushirikiano wa karibu sana ili kuweza kufanikisha kazi hiyo katika maeneo yetu.

A. Z. MWAKIMONGA
AFISA TARAFA
TARAFA YA BUSOKELO.

Nakala kwa:-

- Maafisa Watendaji Kata
- Maafisa Watendaji wa Vijiji
- Wenyeviti wa Vijiji

JAMHURI WA MUUNGANO WA TANZANIA
OFISI YA WAZIRI MKUU
TAWALA ZA MIKOA NA SERIKALI ZA MITAA.

OFISI YA AFISA TARAFA,
TARAFA YA PAKATI,
S.L.P. 34,
TUKUYU.

28/07/2007.

Unapojibu tafadhali taja.

Kumb. Na. BD/GEN/32/VOL.11/20

Kwa yeyote anayehusika,

YAH: **DR. ALL SADICK UREDI.**

Tafadhali husika na kichwa cha habari hapo juu.

Mtajwa hapo juu ni Daktari katika Hospitali ya Mkoa wa Mbeya. Kwa sasa yuko masomoni Chuo Kikuu cha Western Cape Town Afrika ya Kusini.

Amekuja kufanya utafiti kuhusu uzazi wa akina mama na kupata sabau mbalimbali zinazopelekea akina mama kujifungua majumbani.

Utafiti huo atafanya katika Tarafa ya Pakati. Hivyo apewe msaada na ushirikiano wa karibu sana ili kuweza kufanikisha kazi hiyo katika maeneo yetu.

.....Mwale.....
S. MWAKAPALA
AFISA TARAFA
TARAFA YA PAKATI.

AFISA TARAFA PAKATI

Nakala kwa:-
1. Maafisa Watendaji Kata/Masoko, Masukulu
2. Maafisa Watendaji wa Vijiji/Ntandabala, Bujesi, Masukulu, Lyebe
3. Wenyeviti wa Vijiji.

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA WAZIRI MKUU
TAWALA ZA MIKOA NA SERIKALI ZA MITAA.

OFISI YA AFISA TARAFA,
TARAFA YA UKUKWE,
S.L.P 34,
TUKUYU.
23/7/2007

MAAFISA WATENDAJI WA KATA ZA:
KIWIRA/KYIMO

MAAFISA WATENDAJI WA VIJIJI VYA;
KYIMO, SYUKULA, MPANDAPANDA NA ILUNDO,

YAH: DR. ALLY SADIKI UREDI.

Mtajwa hapo juu ni Daktari Hospitali ya Mkoa wa Mbeya.
Kwa sasa yuko masomoni chuo kikuu cha Western Cape - Capetown Afrika ya Kusini.

Amekuja kufanya utafiti kuhusu uzazi wa akina mama na kupata sababu mbalimbali zinazopelekea akina mama kujifungulia majumbani.

Utafiti huo utafanyika katika Tarafa ya Ukukwe kata za Kyimo na Kiwira. Hivyo ninaomba apewe msaada na ushirikiano wa karibu sana ili kuweza kufanikisha kazi hiyo katika maeneo yetu.

E.A. Mwaikokesya
Kny. Afisa Tarafa
Tarafa ya Ukukwe.

KATIBU WA TARAFA
UKUKWE

Nakala:
1. Katibu Tawala Wilaya – Rungwe
2. MKurugenzi mtendaji wa Wilaya ya Rungwe.
3. Mganga Mkuu wa Wilaya ya Rungwe.
4. Dr. Ally Sadick Uredi.

THE UNITED REPUBLIC OF TANZANIA

PRIME MINISTER'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

"Telegrams: REGCOM"
Tel: 255 - 2504045
Fax: 025 - 2504045
E – Mail:rasmbeya@proralg.go.tz
(All letters should be addressed to the regional administrative sec)
In reply please quote:

Regional Administrative Secretary
P.O. Box . 754
Mbeya,
TANZANIA

Ref. No. RMO/E.10/8/123

17 July, 2007

District Executive Director,
P. O. Box 148,
RUNGWE.

Re: PERMISSION FOR RESEARCH WORK ON FACTORS CONTRIBUTING TO HOME DELIVERY IN RUNGWE DISTRICT MBEYA, TANZANIA

Kindly be informed that Dr. Ally Sadiki Uredi is a Medical Officer in Mbeya Regional Hospital. He is a self sponsored student in the University of the Western Cape South Africa. He is doing a Masters research in Public Health as the above heading reads.

Kindly, we request your permission and assistance to make his research work be successful in your district.

Thanks in advance,

Yours sincerely.

M. T. Chitama
REGIONAL ADMINISTRATIVE SECRETARY
MBEYA

Copy to:- Regional medical Officer,
P. O. Box 259,
MBEYA.

" District Medical Officer,
P. O. Box 38,
RUNGWE.

FACTORS CONTRIBUTING TO HOME DELIVERY IN RUNGWE DISTRICT-MBEYA TANZANIA.

INTRODUCTION

Good day madam. My name is Dr Ally S. Uredi and I am a student at the University of Western Cape. I am conducting a research study on factors contributing to home delivery with the intention of improving reproductive health services in Rungwe District. I would appreciate very much your participation in the study. The study could take 30minutes-1hour. Your participation is voluntary. You have a right to refuse taking part or to answer some questions that make you feel uncomfortable. Please read the information sheet that explains the study. You are free to ask any questions about the information in the information sheet, my visit and the purpose of the study.

A. Participant Code: ☐

B. Interviewer code: ☐

D. Date Of Interview (dd/mm/yyyy): DOI: ___/___/_____

E. NAME OF DIVISION: _____

F. NAME OF WARD: _____

G. NAME OF VILLAGE: _____

H. NUMBER OF HOUSEHOLD IN THIS VILLAGE ☐

I. NUMBER OF WOMEN OF 19-49 YEARS OLD WITH AT LEAST ONE CHILD IN THIS HOUSEHOLD ☐

---

1. GENERAL CHARACTERISTICS (OF THE MOTHER): (*Mothers only - Not primary caregivers)*

1.1. Date of Birth for Mother (dd/mm/yyyy): DOBM: ___/___/_____

Age: _____years

1.2 How long have you been continuously living in this village/town? Years ☐

1.3 What is your tribe? ☐

1.4 What is your religion?

☐ 1 Christian
☐ 2 Muslim
☐ 3 Hindu
☐ 4 Other, Specify.....

1.5 Last Standard Passed:

☐ 1 No formal Schooling
☐ 2 Primary School
☐ 3 Secondary School
☐ 4 Technical/Vocational
☐ 5 University

1.6 Marital Status

(Tick One response only)

☐ 1 Single – Never married
☐ 2 Married – monogamous relationship
☐ 3 Married – polygamous relationship
☐ 4 Widowed
☐ 5 Divorced/separated
☐ 6 Co-habiting
☐ 9 No response

2. HOUSEHOLD INFORMATION:

What is the main source of water used for drinking in the household at this time?

(Tick One response only)

☐ 1 Piped – inside house
☐ 2 Piped – yard
☐ 3 Piped – public
☐ 4 Borehole / well
☐ 5 River / Stream
☐ 6 Water tanker
☐ 7 Rainwater tank
☐ 8 Other
☐ 9 Don't know

2.2. What type of toilet do you use in the house?

(Tick One response only)

☐ 1Flush toilet
☐ 2 Pit latrine
☐ 3 Ventilated pit latrine
☐ 4 None
☐ 8 Other
☐ 9 Don't know

2.3. What is the main fuel used for cooking in the house?

(Tick One response only)

☐ 1 Electricity
☐ 2 Gas
☐ 3 Paraffin
☐ 4 Charcoal
☐ 5 Wood
☐ 8 Other
☐ 9 Don't know

2.4. Is anyone living in the household currently employed?
(permanent, part-time, piece work)

☐ 1. Yes	☐ 2. No	☐ 3. Don't know

2.5. Sources of income for the household

Prompt all possible choices
Tick all that apply

☐ 1 Regular employment
☐ 2 Irregular employment
☐ 3 Home employment *(income generating activity performed at home)*
☐ 4 Contributions from others
☐ 5 State pension/Grant
☐ 6 None
☐ 7 Other
☐ 8 Don't know

2.6 What is the approximate total monthly HH income (including employment & grants)?

Tsh. _____ Don't Know_____

What is a type of your house?

(Prompt all the possible choices)
Tick all that apply

☐ 1 Bricks
☐ 2 Mud
☐ 3 Wood
☐ 4 Other specify…

3. DISTANCE TO SERVICES

3.1. How do you usually get to your nearest clinic?

(Tick one)

☐ 1. Walk	☐ 2. Taxi/bus	☐ 3. Own vehicle	☐ 4. Other (specify)

3.2. How long does it take you to get to the nearest clinic?

3.3. How much does it cost to get to the nearest clinic? TSH. _____ NA _____

3.4. How do you usually get to the nearest Hospital?

(Tick one)

☐ 1. Walk	☐ 2. Taxi/bus	☐ 3. Own vehicle	☐ 4. Other (specify)

3.5. How long does it take you to get to the nearest hospital? (in minutes)

3.6. How much does it cost to get to the nearest hospital? TSH. _____, NA _____

3.7. How do you usually get to your nearest traditional birth attendant (TBAs)? *(Tick one)*

☐ 1. Walk	☐ 2. Taxi/bus	☐ 3. Own vehicle	☐ 4. Other (specify)	NA

3.8. How long does it take you to get to the nearest traditional birth attendant (TBAs)?(In minutes)

	NA

3.9 How much does it cost to get to the nearest traditional birth attendant (TBAs)? TSH.--------, NA----------

4: PRIOR PREGNANCY AUDIT (Use Additional Form(s) if necessary)

Explain to woman that you would now like to briefly review ALL of her pregnancies. Complete the following for each pregnancy. Probe to assure all pregnancies covered, i.e. ask if any other pregnancies after finished, specifically ask about miscarriages or babies that have died. If Home birth, probe for reason(s) – classify and specify specific reasons as described by woman.

4.0. How Many Pregnancies have you had (#):_____ ACCP ACCP/ACSS ACCP/ACSS

4.1 Pregnancy a) # b) Year of delivery	4.2 Outcome 1 Live Birth 2 Still Birth (>=20 weeks) 3 Miscarriage (<20 weeks) 4 TOP	4.3 ANC 1Yes 2 No	4.4 Delivery Attendant 1 Nurse/Midwife 2 Doctor 3 Other Health Worker 4 TBA/CHW 5 Friend/ Family member 6 None	4.5 Place of Delivery 1 Hospital 2 Clinic 3 Home 4 BBA 5 Other - Specify 4.6 If Home Birth/with TBA or without TBA, Probe Why? – Specify All 1 Woman's Choice 2 Decision by family 3 Can't get to facility 4 Can't afford facility 5 Don't like facility 6 Not planned 7 Other 9 Not applicable
4.1a 1	4.2	4.3	4.4	4.5
4.1b				4.6
4.1a 2	4.2	4.3	4.4	4.5
4.1b				4.6
4.1a 3	4.2	4.3	4.4	4.5
4.1b				4.6
4.1a 4	4.2	4.3	4.4	4.5
4.1b				4.6

GOOD START MATERNAL HEALTH STUDY: PRIOR PREGNANCY AUDIT:
Additional form for 5th to 8th Pregnancy

4.1 Pregnancy a) # b) Year of delivery	4.2 Outcome 1 Live Birth 2 Still Birth (>=20 weeks) 3 Miscarriage (<20 weeks) 4 TOP	4.3 ANC 1Yes 2 No	4.4 Delivery Attendant 1 Nurse/Midwife 2 Doctor 3 Other Health Worker 4 TBA/CHW 5 Friend/ Family member 6 None	4.5 Place of Delivery 1 Hospital 2 Clinic 3 Home 4 BBA 5 Other - Specify 4.6 If Home Birth/with TBA or without TBA, Probe Why? – Specify All 1 Woman's Choice 2 Decision by family 3 Can't get to facility 4 Can't afford facility 5 Don't like facility 6 Not planned 7 Other 9 Not applicable
4.1a 5	4.2	4.3	4.4	4.5
4.1b				4.6
4.1a 6	4.2	4.3	4.4	4.5
4.1b				4.6
4.1a 7	4.2	4.3	4.4	4.5
4.1b				4.6
4.1a 8	4.2	4.3	4.4	4.5
4.1b				4.6

5. REVIEW OF ANTENATAL SERVICES IN LAST PREGNANCY

Now I would like to now discuss your last pregnancy.

5.0 Did you attend Antenatal Clinic (ANC)?

□ 1 Yes
□ 2 No did not attend any ANC
□ 3 Attended ANC with Traditional birth attendant (TBA)
□ 4 Unknown

From the question 5.0, if attended antenatal clinic during the last pregnancy start with question #5.1
If did not attend antenatal clinic during the last pregnancy start with question #5.7

5.1. What clinic did you go to for antenatal care during your last pregnancy?

_____

5.2. How many months pregnant were you when you first went to the clinic or hospital concerning your pregnancy? (*code: # of months or 'Don't know'*)

If answer to # 5.2 is 0-4 months, then skip to question 5.5, otherwise proceed to question 5.4.

5.3 Why did you not go for antenatal care/booking earlier in your pregnancy? *Write short answer or story around late booking as told by mother.*

5.4. Why did you go for antenatal care?
(Probe for reasons related to health benefits for baby, health benefits for mother, etc. or understanding of why antenatal care might be important, etc. if mother does not mention. If mom gives a short answer such as "good for baby" - ask her "How is it good for the baby?" Try to illicit some detail of her understanding of why she comes for antenatal care. Also note that "I Don't Know" is also a valid answer.)

5.5. Did anyone of your family or friends tell you to go for antenatal care? 1 Yes ☐ 2 No ☐

if No, skip to 5.7

If YES, ask:

5.6. Who told you to go? *(tick all that apply)*

- ☐ 1 Husband/Partner/Father of baby
- ☐ 2 Mother
- ☐ 3 Mother-in-law
- ☐ 4 Sister
- ☐ 5 Aunt/Cousin/Grandmother
- ☐ 6 Friend
- ☐ 7 Woman's Father/Brother
- ☐ 8 Any other male relative
- ☐ 9 Employer
- ☐ 10 Other - Specify _____

Barriers to Antenatal Clinic

5.7. What were the PROBLEMS you had attending antenatal clinic?

If answer NO PROBLEMS AFTER PROBING, write "No Problems" and skip to question #5.8.

For 5.7. If the woman does not mention any of the following - please probe/ask about the following as other potential barriers to attending antenatal care

1. Money	1 Yes ☐	2 No ☐
2. Transport	1 Yes ☐	2 No ☐
3. Family members or Friends	1 Yes ☐	2 No ☐
4. Family responsibilities - care of other children, household chores or responsibilities	1 Yes ☐	2 No ☐
5. Work/Employment	1 Yes ☐	2 No ☐
6. Treatment by health staff in prior pregnancies or prior medical visits	1 Yes ☐	2 No ☐
7. Other	1 Yes ☐	2 No ☐

Specify_____

5.8. What sort of things or people made it EASIER to attend antenatal care? *(Note: do not ask this question if mother did not attend ANC)*

Care & Information During Pregnancy

5.9. I would now like you to think about **all of your visits during your last pregnancy.**

5.9A	Not counting waiting time, how many minutes did you usually spend with the health personnel during antenatal clinic? *enter number of minutes*	
5.9B	Did you have a chance to meet the health care provider in private during antenatal care? *Tick one*	☐ 1 yes ☐ 2 No
5.9C	Did the staff talk with you about the progress of your pregnancy? *Tick one*	☐ 1 yes ☐ 2 No ☐ 3 Discussed only when asked
5.9E	Were you able to ask any questions during your visits? *Tick one* *if no, go to question 5.9G.*	☐ 1 yes ☐ 2 No
5.9F	Did you understand the answers to your questions? *Tick one*	☐ 1 yes ☐ 2 No ☐ 3 Not applicable
5.9G	Did the staff ask you to come back for another visit? *Circle one*	☐ 1 yes ☐ 2 No

5.10. How were you treated by the health staff during your antenatal visits?

5.11. Probe for both negative and positive aspects of staff treatment if not mentioned by the respondent, for example probe for:

Negative:	***Positive:***
☐ rude	☐ interested in me
☐ too rushed	☐ respectful
☐ did not explain what was wrong	☐ free to ask questions
☐ did not speak my language	☐ provided privacy
☐ had to wait a long time to see nurse or doctor	☐ made me feel comfortable
☐ Other negative – Specify:	☐ Other positive – Specify:

5.12.	How would you rate the antenatal care services you received? *tick box*	☐ 1 poor ☐ 2 average ☐ 3 excellent
5.13A	Would you recommend the antenatal care services to other women? *tick box* 5.13B. Why or Why not? _____ _____	☐ 1 yes ☐ 2 No

	5.14. What are some danger or warning signs of a problem during pregnancy or birth? *Listen carefully. Probe for multiple responses.* ***Do not read out list.***	*Tick as many box(es) as listed by subject*	
		Spontaneous	*With probing*
5.14A	previous bad obstetric history / abdominal scars / previous stillbirth		
5.14B	hypertension / high blood pressure		
5.14C	severe headaches		
5.14D	swelling of face, hands, feet or legs		
5.14E	fits/seizures		
5.14F	loss of consciousness		
5.14G	anaemia		
5.14H	4pallor/pale		
5.14I	severe fatigue/exhaustion/unable to do normal daily chores		
5.14J	Breathlessness/problems breathing/short of breath		
5.14K	cessation of fetal movement / baby does not move		
5.14L	abnormal lie / position of fetus /breech (bottom or legs first)		
5.14M	sepsis / infection		
5.14N	fever		
5.14O	cough that lasts several weeks or more		
5.14P	loose stools (diarrhoea) that last several weeks or more		
5.14Q	foul smelling discharge from vagina (birth canal)		
5.14R	loss of weight		
5.14S	bleeding/ haemorrhage		
5.14T	multiple pregnancy / large abdomen		
5.14U	obstructed / prolonged labour / "sun set two times"		
5.14V	labour/abdominal pains more than 3 weeks before baby is due		
5.14W	Waters break early before labour		
5.14X	Other - specify:		
5.14Y	Don't know		

5.15A. Sometimes women are not always able to follow the advice of the nurse, midwife, doctor or other health provider. Was there any time during your pregnancy that the health provider gave you instructions or advice you were unable to do or complete?

1 Yes ☐ 2 No ☐

If No, skip to 6.1

If YES,

5.15B. Why were you NOT able to follow the health provider's instructions or advice?

6. REVIEW OF LABOUR & DELIVERY CARE

Now I would like to ask you about the birth of your last baby.

6.1. Where did you deliver your last baby?

- ☐ 1 Hospital
- ☐ 2 Clinic
- ☐ 3 Home with TBAs
- ☐ 4 Home without TBAs

6.2. Did any of your family or friends stay in the room with you throughout your labour and birth?

1 Yes ☐ 2 No ☐

6.3. Please tell me if you liked having your family/friend(s) with you during labour or *birth (if answered YES to 6.2)*

1 Yes ☐ 2 No ☐

OR

Please tell me if you would have liked having your family/friend(s) with you during your labour and birth *(if answered NO to 6.2)*

1 Yes ☐ 2 No ☐

6.4A. Did you have any problems getting to the hospital or clinic or TBAs in labour?

1 Yes ☐ 2 No ☐

if No, skip to 6.5

If YES,

6.4B. Please describe the problems you had getting to the hospital or clinic or TBAs?

6.5. Why did you choose to give birth at this place (refer to pregnancy audit for place of birth, i.e. hospital/clinic/home)

(Probe about the role of family/friends in deciding about where the delivery should take place).

6.6.	Did you have to pay for your last birth? If yes, how much did you pay, including fees, drugs and supplies? *(Enter amount, or a 0 if no payment was made)*	
6.7	If home delivery, immediately did you go to clinic or hospital for check-up?	☐ 1 Yes ☐ 2 No
6.8.	How soon after the birth did you leave the facility? *tick one box*	☐ 1 same day as birth ☐ 2 day after birth ☐ 3 more than one day after birth ☐ 4 Not applicable
6.9.	Were you advised to go/return for a check-up after your last birth? *tick box*	☐ 1 Yes ☐ 2 No ☐ 3 Not applicable
6.10.	Did the nurse/midwife/doctor/TBAs discuss family planning with you before you were discharged from the delivery facility? *tick box*	☐ 1 Yes ☐ 2 No ☐ 3 Not applicable

6.11. How were you treated by the health staff/TBAs during the delivery of your last baby?

11

6.12. Probe for both negative and positive aspects of staff treatment if not mentioned by the respondent, for example probe for:

Negative:	***Positive:***
____ rude ____ too rushed ____ did not explain what was wrong ____ did not speak my language ____ left me alone during my labour/birth ____ yelled at me ____ Other negative: Specify:_____ _____	____ interested in me ____ respectful ____ free to ask questions ____ provided privacy ____ made me feel comfortable ____ explained what was happening ____ Other positive: Specify:_____ _____

6.13.	How would you rate the labour and birth services you received? *tick box*	☐ 1 poor ☐ 2 average ☐ 3 excellent
6.14A.	Would you recommend the labour & birth services to other women? *tick box* 6.12B. Why or Why not? _____ ___ _____ ____	☐ 1 yes ☐ 2 No

6.15. Does your tradition/custom/religion/culture prevent women from delivering at a health facility

☐YES
☐NO

If YES, Could you describe or explain these reason (s)

7. HEALTH INFORMATION

7.1. Where do you usually get information about your health:

Tick all that apply

- ☐1 Health Care Provider at Clinic or Hospital
- ☐2 Community Health Worker
- ☐3 Family Member, Specify:_____ _____
- ☐4 Friends
- ☐5 Traditional Healer
- ☐6 Church or Other Community Leaders
- ☐7 Radio, Specify: _____
- ☐8 Television, Specify:_____
- ☐9 Newspaper or Magazines, Specify:_____
- ☐10 Other, Specify _____

7.2. Which of the above do you think provides the important information or best advice when you are making decisions about your health or baby's health:

Tick only one

- ☐1 Health Care Provider at Clinic or Hospital
- ☐2 Community Health Worker
- ☐3 Family Member, Specify:_____ _____
- ☐4 Friends
- ☐5 Traditional Healer
- ☐6 Church or Other Community Leaders
- ☐7 Radio, Specify:_____
- ☐8 Television, Specify:_____
- ☐9 Newspaper or Magazines, Specify:_____
- ☐10 Other, Specify: _____

For Questions 7.1 and 7.2 specify NAMES of radio station(s); TV station(s), Newspaper(s) or Magazine(s) in the Specify Box. Then discuss with the mom any specific programmes she favours from these sources, if any, and write description(s) in 7.3 below:

7.3. Specific Radio or TV programmes mother uses as a source for Health Information:

THANK YOU FOR TAKING YOUR TIME TO SPEAK TO US TODAY. DO YOU HAVE ANY QUESTIONS THAT YOU WOULD LIKE TO ASK US?