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## Factors Associated with Home Deliveries in Katondwe, Luangwa District

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## Abstract

Despite the policy to stopping traditional birth attendants from conducting deliveries at home and encouraging all women to give birth at the health facility under skilled care, many women still give birth at home. A qualitative descriptive exploratory cross section survey was used to gather data by conducting structured interviews with 50 women of childbearing age who had a recent or previous home delivery.

The following factors were found to be associated with home deliveries in Katondwe, Luangwa district; abrupt onset/precipitate labour, long distance/transport difficulties to reach the nearest health facility, having had successful HD, poverty/low income and gender though having a small percentage. Parity in which the majority were multiparas women, attitude was also associated with home deliveries and other unforeseen circumstances such as a funeral and being alone at home at the onset of labour.

**Keywords:** Traditional birth attendants; Home Deliveries; Skilled Care

**Abbreviations:** ANC: Antenatal Care; APH: Ant-Partum Haemorrhage; CSO: Central Statistical Office; CHW: Community Health Workers; EmOC: Emergency Obstetric Care; HD: Home Delivery; MMR: Maternal Mortality Rate; MDGs: Millennium Development Goals; MOH: Ministry of Health; NMR: Neonatal Mortality Rate; PPH: Post-Partum Haemorrhage; SBA: Skilled Birth Attendants; SSA: Sub Saharan Africa; TBA: Traditional Birth Attendants; WHO: World Health Organization; ZDHS Zambia Demographic Health Survey.

## Chapter 1

### Introduction

Labour is a natural physiological process that any normal pregnant woman undergoes in order to deliver the foetus, placenta and its membranes and other products of conception. As such, most women find it very difficult to accept the fact that they should deliver from a health facility because labour commences spontaneously whether from home or at a health facility. Besides, their mothers and other relatives or neighbours who have delivered before think that they have all the necessary knowledge and experience to be able to conduct one. But little do they know that every pregnancy is a risk to both the mother and the foetus and that pregnancy at times comes with complications such as pre-eclampsia, eclampsia, foetal distress, obstructed labour, placental previa, haemorrhage or even death if not properly managed. Most of these complications don't just need an experienced relative or TBA to manage them but qualified medical personnel with more scientific knowledge and experience. Besides all these risks, one cannot be too sure that a home environment is clean or safe enough for a delivery and that sterile instruments are being used to cut and tie the cord or if aseptic technique is being used and if the person conducting the delivery can manage complications when they arise.

The continuing rise of maternal mortality ratio (MMR) is mostly affecting the developing countries. It is estimated that 47% of global maternal mortalities occur in Africa with highest levels in sub-Saharan countries. 85% are direct results of complications arising during pregnancy, delivery or puerperium. In these countries over 60% of home deliveries are taking place in rural areas with unskilled attendants.

About 35% of women in developing countries have no antenatal care during pregnancy, almost 50% give birth without skilled attendants and 70% receive no postpartum care. WHO also further estimates that about 800 women die in childbirth every day adding up to about 300,000 in a year.

Various factors such as social-economic conditions, the three delays - delay at home or in the community, delay getting to a health centre or hospital and delay at the health facility in providing adequate obstetric care and poor accessibility to maternal health care have been implicated in home deliveries [1,2].

### Background Information

The burden of maternal deaths occurring worldwide

has been estimated at 358,000, a decline from the previous 529,000 in the recent past [3,4]. However, the bulk of these deaths (99%) still come from developing countries and the sub-Saharan African region still accounts for the majority of deaths by region (640 per 100,000 live births) followed by south east Asia which had an estimated 280 deaths per 100,000 live births in 2008 [4]. Maternal deaths have been shown to contribute to adverse perinatal outcomes such as stillbirths and interventions to reduce stillbirths are likely to reduce maternal mortality as well.

Stillbirths have been attributed to the care provided at delivery and the place where delivery occurs. Furthermore, TBAs who largely assist deliveries in developing countries, mostly at home have been shown to be unable to contribute to the reduction of maternal mortality (WHO 2004; WHO 2006; The Lancet Maternal Survival Series Steering group 2006; CSO, MOH, TDRC, IIPS and Macro International 2007; NIPS [Pakistan] and Macro International Inc. 2007; University of Zambia and Macro International Inc. 2009) [5].

On the global scale, home deliveries in the developed western countries constitute a very marginal share of total deliveries, being mainly below 2% with the exception of Netherlands where home deliveries are above 30%. On the other hand, in developing countries home deliveries constitute a larger share of all deliveries with statistics usually above 50% [5].

Zambia is one of the sub-Saharan African countries with a high maternal mortality ratio (MMR). The latest demographic and health survey (DHS) showed that the country's MMR is 591 maternal deaths per 100,000 live births. Moreover, more than half (53%) of the women in Zambia, do not receive skilled birth attendance, the survey further showed that these numbers are even higher in rural areas where more than seventy percent of the women give birth at home, outside the health facility, and are often assisted by TBAs.

The World Health Organization (WHO) has defined TBAs as persons who assist the mother during childbirth and learn her skills through apprenticeship that involves both observation and imitation, and is often highly regarded by the community that chooses her to assist women in childbirth. Reviews and studies conducted in Zambia and other developing countries have reported the effectiveness of TBAs in improving maternal and new-born health outcomes. For example Gill and colleagues showed that training TBAs to

manage common perinatal conditions significantly reduced neonatal mortality in lufwanyama, Zambia.

Although training TBAs may provide them with basic midwifery skills, most TBAs, have no access to the requisite clean delivery tools such as supply of drugs and equipment for obstetric care, this may increase the risk for infections during childbirth. Moreover, the TBAs have no access to referral services in case of complications during and after birth.

Consequently, there has been a policy change in many developing countries including Zambia to stop the funding and training of TBA programmes. Rather, all women are recommended to use facility-based delivery services provided by trained and skilled health care staff. This change in policy has resulted in TBAs not being recognised as part of the providers of essential obstetric care in Zambia. Nevertheless, many women in rural Zambia still give birth at home and TBAs are still seen as essential providers of obstetric care.

### Statement of the Problem

Home deliveries in developing countries are largely unplanned and as such occur under conditions without the minimum recommended standards required for a safe delivery. They are often conducted without the care of professional assistants, such as trained midwives, a requirement by law in some developed and industrialized nations. Therefore because of being mostly unplanned and accidental, these deliveries have been associated with increased foetal and early neonatal mortality Almeida, et al. and have been shown to be unsafe and unhygienic in developing countries and may have implications on neonatal and maternal outcomes. Furthermore, home deliveries have not been shown to improve outcomes even when the women were later transferred to the hospital in the course of their labour, as adverse events still occurred.

In Zambia home deliveries accounted for 52% of all births in the five year period preceding the health survey of 2007. At the provincial level, 68.4% of the deliveries in Northern Province occurred at home followed by Central Province and Luapula Province at 66.1% and 64.3% respectively [5]. Births occurring outside the health facility in Zambia are more likely to have pregnancy complications that may result in maternal and foetal deaths due to lack of skilled attendance. In Luapula and Northern Province, 45 and 41% of births respectively, were more likely to be assisted by TBAs than other provinces in Zambia [5].

## Factors Contributing To the Problem

### Education

Some studies have shown that women who are less educated or illiterate are associated with having home deliveries. Lukumar, et al. showed that low maternal education of less than grade 5 was significantly associated to a home delivery.

Other studies were also able to illustrate that mother education levels that were lower than primary or indeed of those that had not attended school at all, as being associated to delivering at home. The odds of a home delivery was 3.2 times higher among women who were illiterate than those who were literate.

### Parity

Women with home deliveries are more likely to be multiparous. This association was also shown by Lukumar, et al. who found that women with more than three children delivered at home.

Thine, et al. also found home deliveries by women to be associated with a birth higher order, as did Adikari, et al. whose study showed that the odds for home deliveries was 2.5 times higher among multiparous women compared to primi-parous women.

### Gender

Gender also plays a role in determining a place where a woman should deliver in that most women have little or no say in family matters where a man is seen as the head of the family and where tradition does not support women to argue with decisions made by their husbands.

The gender of the head of the family was significantly associated with the place of delivery. This was also demonstrated by Hodgkin, who demonstrated that households that delivered in the formal (health facility) sector were less likely to be headed by a male.

### Distance

Distance comes with a lot of challenges in terms of mode of transport to reach the health facility and the income to get there. At times the mode of transport might be available but the driver may not be around or there may be no money for fuel as was with the case of a woman we interviewed in katondwe who delivered from home.

Living more than an hour's distance from a health facility was also associated with a higher prevalence proportion for home deliveries.

### Income/Poverty

People with low income are less likely to deliver from a health facility due to lack of transport and other logistics that may be needed and poverty also tends to give people an attitude of low self-esteem and mediocrity such that one even feels that they are too poor to go to a modern health facility and that such facilities are kept for the rich and educated.

Lower yearly income and being in low income families was also associated with a higher risk for home deliveries. Homesteads that are not of high social class are more likely to favour delivery at home.

In generating qualitative findings, Mrisho, et al. also summarised that women deliver from home due to lack of money and that they found delivering from home to be cheaper. The lack of transport was also reported to be a contributing factor.

### Attitude of Midwives/Staff

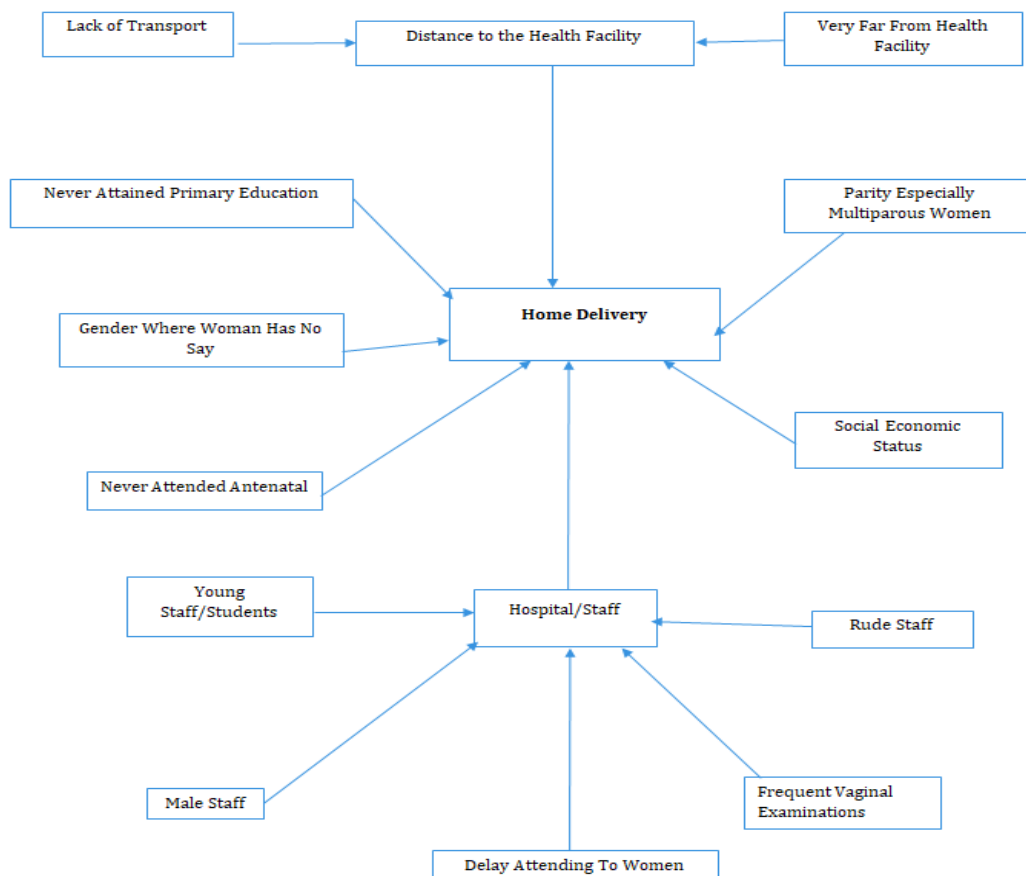
The attitude of midwives and other members of staff during ANC care or during the previous delivery also play a vital role in determining women's preference of a place where to deliver from. Nurses and midwives have been reported to be very harsh when conducting deliveries and are known to use abusive languages. That is why most multiparous women who delivered from the health facility where they were ill-treated before, would prefer to deliver from home were they will be respected and addressed accordingly.

### Antenatal Care Attendance

Most women who never attend antenatal visits during their pregnancy lack the knowledge to make an informed decision about choosing where to deliver and why deliver there.

Most previous studies were able to find a statistically significant association with the lack of antenatal care attendance and delivering at home.

### Problem Analysis Diagram





## Justification of the Study

The home as a place of delivery is not a safe environment for one to be able to conduct a delivery and does not guarantee safety to both the mother and the baby.

Despite the availability of health facilities in both urban and rural areas, home deliveries have still continued to occur especially in rural areas under unhygienic environments with untrained personnel who lack the necessary knowledge and skills to properly conduct a delivery and manage complications which may arise.

It's even sad, to note that even those who attended four consecutive antenatal visits are among those found to deliver from home. Therefore the question why still stands with a big silence hence the need to further investigate more and probably come up with a lasting solution.

## Research Objectives

### General Objectives

To determine the factors associated with home deliveries.

### Specific Objectives

- To find out why home deliveries are still occurring in rural areas.
- To find out which age group is mostly implicated in home deliveries.
- To find out if there are any complications associated with home deliveries.
- To find out if women who deliver from home are aware of the complications which may arise during delivery?
- To ascertain the availability and accessibility of maternal health services.

### Research Hypothesis

Home deliveries occur under unsafe and unhygienic conditions with undertrained personnel and without any complication preparedness.

## Operational Definition of Terms

### Home Delivery

Childbirth occurring after 28 weeks of gestation outside the confines of a hospital, rural health center or birthing center either in the woman's own home, the traditional birth attendant's home or the woman's relative's home or indeed any place that does not meet the above mentioned confinement.

### Traditional Birth Attendant (TBA)

A birth attendant who is not a health professional and is based in the community and may or may not have had the basic orientation on delivering babies.

### Skilled Birth Attendant (SBA)

A health care professional with midwifery skills who has been educated and trained to manage pregnancy, child birth, the immediate postnatal period and who can identify, manage and refer maternal and neonatal complications (WHO 2004b:11).

### Skilled Attendance

Care rendered to a woman during pregnancy, childbirth and immediately after birth by an accredited and competent health care provider who has at his/her disposal the necessary equipment and supplies and the support of a functioning health system, including transport and referral facilities for emergency obstetric care (WHO 2004b:11).

### Antenatal Care

The care given to a pregnant woman who comes to a hospital or rural health center from the time that conception is confirmed until the beginning of labour.

### Parity

The condition of a woman with respect to the number of viable (born at 28 weeks of gestation and above) children she has ever born.

### Maternal Mortality Rate (MMR)

MMR is a health indicator expressed as a ratio or rate within a country, or within an institution. It is calculated as the number of deaths during any one year per 100 000 live births during the same year (WHO 1999:11)

## Variables and Cut off Points

### Dependent Variables

- Home delivery
- Institutional delivery

### Independent Variables

- Personal perception on the need and importance of an institutional delivery.
- Attitude
- Age

- Transport
- Tradition
- Knowledge
- Income
- Distance
- Education
- Past experiences

- Abrupt onset of labour
- Health services not good enough.

**Cut Off Points**

- All women who have never had a home delivery.
- All women who refused to participate in the study.

## Chapter 2

### Literature Review

#### Introduction

According to Polit, et al. a literature review is the scanning through existing literature that is relevant to the studied problem. This involves searching for information and ideas from what has previously been reported. It also involves reviewing the research methodologies adopted by different studies and selecting a suitable method for studying one's current research problem. Chapter two reviews literature pertaining to the factors influencing women's decisions to deliver their babies at home. The literature review will cover published and unpublished reports from a global, regional and national view point.

Of all the indicators monitored by the United Nation, maternal mortality is the one with the widest discrepancies between the developed and developing countries. However, monitoring progress towards maternal mortality reduction is difficult therefore; indicators set to monitor progress are proportional to deliveries by skilled birth attendance. A skilled attendant can be a medical doctor or a person with midwifery skills who is trained to diagnose and manage obstetric complications as well as normal deliveries, give necessary supervision, care and advise to women during pregnancy, labour and the postpartum period. Skilled attendance is often available at health facility level although there is historical evidence of well-developed home visiting midwives at community level as in Norway, Sweden and also in Holland.

"For a mother and her new born a skilled birth attendant can make a difference between life and death. Not only can they recognise and prevent medical crises, but can also identify obstetric complications early and effect immediate referral as a lifesaving care." Says Joy Phumaphi. Trained birth attendants cannot, in most cases, save women's lives because they are unable to manage most of the obstetric complications arising during pregnancy, delivery and postpartum period. Referral in the community is constrained by transport difficulties.

#### Global Perspective

Globally, maternal deaths are rare in developed countries but are an everyday event in developing countries. Most life threatening obstetric complications require hospital

treatment to avert maternal mortality. In Africa maternal mortality is estimated at 251,000 women who die annually from pregnancy and child birth related conditions. For every maternal death there are at least thirty women who suffer short or long term disabilities. Most maternal deaths occur during child birth and in the immediate postpartum period. To avert this situation, all women should have access to basic maternity care during pregnancy and delivery, which includes quality antenatal care, clean and safe delivery and post-partum care for mother and child and unlimited access to EmOC.

In many developing countries large proportion of deliveries take place outside the formal health care system often assisted by a relative or Traditional Birth Attendant.

In Sri Lanka, maternal mortality has followed a downward trend from 2100 per 100,000 live births in 1981 to 240 in 1995. This decline is attributed mainly to high rate of institutional deliveries (90%) attended by midwives. A similar situation is also obtained in Sweden where low maternal mortality is attained through the training of community midwives to conduct delivery assistance to poor women and offering them the option of having a safe and inexpensive home delivery. Reductions in England and United States have been attributed to good antenatal care.

Reduction by three-quarters, between 1990 and 2015, the maternal mortality ratio; goal 5 (MDG) is the proportion of birth attended by a person who is trained on midwifery skills (skilled health personnel). A vast majority of women will need only basic care during labour and delivery. Cleanliness and the presence of skilled personnel will help to ensure that normal births are clean and safe and that obstetric complications are dealt with promptly. During child birth every woman should be helped by health personnel who can manage a normal delivery, be able to detect and manage complications such as haemorrhage, convulsions, shock and infection. Doctors, midwives and nurses who attend deliveries must have midwifery skills needed to recognise the onset of complications, perform essential interventions, start treatment and supervise the referral of mother and baby for management of interventions which are beyond their competence. Skilled attendance plays a pivotal role in reducing maternal and new-born mortality and morbidity says the joint statement of World Health Organization (WHO), ICM and FIGO. This statement calls for better monitoring and reporting on progress in achieving the

MDG target of increasing the proportion of birth attended by a skilled birth attendant to 90%.

Series of studies conducted in developing countries shows a large proportion of deliveries without skilled attendance and how they contribute to high maternal mortality and morbidity. A study in South Eastern Nigeria shows a total of 52% deliveries outside health institutions while 47.1% delivered with health institutions. Twenty seven percent (27%) of the women had no formal education, 37.4% had primary education, 13.5% had secondary education and 21.5% had post-secondary education. Choice of place of delivery may be influenced by educational level and place of residence. Another study in rural Nigerian community reveals the same. Among the 225 randomly selected mothers, private maternity centre was the most preferred place of delivery (37.3%), then traditional birth attendant (25.5%), and government facility (15.7%). Education level was also found to be significantly associated with the choice of place of delivery.

### Regional Perspective

Most studies conducted in Nigeria, revealed similar situations. A cross sectional survey of 100 randomly sampled women in Oyo state Nigeria to study the pattern of utilization of antenatal, delivery and postnatal services in the community, revealed that utilization of antenatal care services was relatively high, however, most of the respondents delivered at home without the supervision of trained personnel. This poor utilization of institutional delivery services was attributed to advanced labour and or perceived poor quality of the health facilities. Educational attainment also significantly influenced the respondent's choice of place of delivery. Most of these deliveries are attended by Traditional Birth Attendants (TBAs), relatives or women themselves.

Similar studies revealed high home deliveries with trained TBAs or untrained. In Gambia a study on maternal mortality levels, causes and contributing factors, revealed that out of the 18 deaths studied, 5 were home deliveries attended by relatives and trained TBAs. Of these none had live births. Causes of death for 2 women were haemorrhage from retained placenta which cannot be managed effectively by such attendants. Times of death are mostly during the post-partum period. In Gambia a study on emergency obstetric care (EmOC) revealed 30.4% institutional deliveries despite the high antenatal care (ANC) coverage of 96%.

In Malawi, another study also revealed a 95% ANC coverage but low institutional delivery (41%). Some women prefer to deliver from home because of adherence to traditional birthing practices and they believe that pregnancy

is a test of endurance and maternal death is sad but a normal event. Another study in India revealed that out of 2861 deliveries, 85% were at home, and 14.4% of the deliveries were complicated. Of the complicated deliveries, 78.9% were in a hospital but case fatality among these complicated deliveries was only 0.3%. This indicates the importance of institutional deliveries in maternal mortality reduction.

In Kenya, to determine the utilization of antenatal and maternity services by mothers revealed that utilization of health facility for maternity services depends on the number of children and the distance to the health facility. As the number of children increases, utilization decreases. This shows that distance hinders the use of health facilities.

In Papua New Guinea were most women deliver at home, maternal deaths were explored to assess circumstances surrounding to their deaths. Post-partum haemorrhage from retained placenta and puerperal sepsis were common causes of death. Follow up of a group of pregnant women shows that abnormal labour was frequent. Twenty four (24%) of multigravida reported a labour that lasted more than 24hours. In 9% of all births, the third stage lasted longer than one hour, or products were retained. Twenty seven 27% of village deliveries were attended by female relatives, while 12% by their husbands. Delay with delivery of the placenta was relatively common; 1-2 hours after delivery in 5 women and after two hours in another 5 women. Most studies revealed how women resulted to delivering at home or even lost their lives on their way to health facilities due to lack of transport or long waiting hours to get one. Women's account of maternity services during labour and delivery in Ghana shows that choice of place of delivery depends on poor outcomes of previous pregnancies, staff attitude, cost of services, geographical access, recommendation from friends from friends and family members and proximity of a facility to family members for support and care, confidentiality and privacy. Perception and poor quality of care deterred women from choosing certain facilities for delivery.

### National Perspective

Coming to Zambia, a cross sectional study revealed that of the 332 women interviewed, 94% prefer to deliver in health facilities but only 54% did so. Lack of transport, long distance, user fees and lack of adequate health education given during ANC attendance were cited as reasons for non-use.

Furthermore, another cross sectional study conducted in 2008 in Nchelenge district which had a prevalence of 43%, recorded 3,449 deliveries in health institutions but a total of 1,946 deliveries were also reported to have occurred at home assisted by traditional birth attendants. The following

were amongst the factors that were associated with home deliveries in Nchelenge district.

### Long Distance to Health Facilities

The study revealed that the distance from the mother's house to the health facility was very far. This finding coupled with lack of transport, made it very difficult for women in labour to get to the health facility. 'My labour started at 03:00 in the early morning and we called the traditional birth attendant to escort us to the clinic but then ended up delivering before reaching the hospital. There was no transport available and walking proved to be a big challenge' (In-depth interview, female 34 years, Mantapala village).

### Abrupt and Unexpected Labour

For most mothers the delivery was just unexpected. 'If things happen like that, one has no option but to deliver wherever they are as you cannot prevent the baby from coming if it's on the way' (focus group discussion, female 33 years kambwali village).

### Circumstances Beyond Control

Some women reported circumstantial reasons for delivering at home. 'I delivered at home because I had a three year old child whom I could not leave at home as no one was around to look after him and at the time, people were being chased away from the clinic because of the cholera outbreak' (In-depth interview female 29 years, kafwala village).

'Women shun delivering at the clinic because it is shameful when after five or six months not a single piece of napkin has been prepared for the baby and so they feel ashamed and would rather deliver at home' (focus group discussion female 43 years, kabuta village).

### Myths and Traditional Myths

Most women decided to deliver at home in order to be attended by their grandmothers and be treated for incila, which according to the participants, was a situation where the partner or husband of the pregnant woman or indeed the pregnant woman herself engaged in sexual affairs with other people during the woman's pregnancy, as a result of which the woman could have difficulties at delivery.

"The process of preventing death by " incila" requires the woman to divulge confidential information to the women assisting her delivery so that she delivers well in addition to taking the medication and so some women even go further away from their own villages to other villages for confidential

reasons because some traditional birth attendants do not keep secrets. If there were too many men that the woman may have had extramarital affairs with while pregnant and they could not all be counted, then she is required to put maize meal into a bow as a gift, for everything to end there and this cannot be done at the clinics' (focus group discussion female 56 years, kabuta village).

The other reason why women prefer to deliver at home is to have their babies protected from "icifutato" which is a situation where the baby may die if the father of the child recommences sex with a different woman other than his spouse who has not even recovered and healed after delivery of the child. So the woman will prefer to deliver at home so that the baby after being born is bathed in water that is medicated to prevent death by "icifutato" (focus group discussion male 59 years kambwali village).

It was also further reported that, women prefer delivering at home because of the availability of medicines for situations such as kamulengule. 'This "kamulengule" happens when both partners (husband and wife) were faithful too each other throughout the gestation of the pregnancy but when the time for delivery approaches the woman may fail to deliver because some people out of envy and malice would just want to wish doom on the couple by using sorcery at the spot where the woman may have urinated and thus she would fail to deliver. Therefore to avoid this misfortune from taking place, the woman would rather be delivered at home where the medicine can be found and not the health facilitated' (focus group discussion male 56 years kafutuma village).

### Prevalence of Home Deliveries

The prevalence of home deliveries shows regional variations with South East Asia showing values reaching as high as 65%; Europe less than 2% and Africa with estimates reaching as high as 62% in some areas (kukulu and Oncel 2007; IIPS and Marco International 2007; NIPS [Pakistan] and Marco International Inc. 2008; NPC and ICF macro 2009).

In South central Africa where Zambia is situated, statistics on home deliveries showed the prevalence of 19% in Namibia, 43% in Malawi, 52% in Zambia and 53% in Tanzania (NBS) [5].

### Conclusion

Home deliveries have to this date continued to be shrouded with much controversy and debate. Several studies have demonstrated different assertions about the effects that home births have, with regard to maternal and neonatal outcomes when compared to hospital conducted deliveries.

Some show that home deliveries have harmful effects on foetal and maternal outcomes when compared to those conducted in the hospital setting; while other studies demonstrated no such differences but to the contrary reported that home delivered births had lower measurements of serious maternal morbidities when compared to those that took place in the hospital.

The contention in the disputes over adverse effect on maternal and neonatal outcomes as a result of either a hospital or home delivery by some studies has been failure by them to account for whether the home or hospital setting allowed for the role of prior planning of the delivery either in the home or hospital environment.

## Chapter 3

### Research Methodology

#### Introduction

Research methodology describes the way in which pertinent information will be gathered to answer the research question or describe a phenomenon related to the research problem. It focuses on research design, research setting, study population, sample selection, sample size, data collection tool, validity, reliability, pilot study, ethical considerations.

#### Research Design

A research design is the overall plan for addressing a research question, including specification for enhancing the integrity of the study. In this study whose title is "Factors associated with home deliveries in katondwe, Luangwa district" a non-experimental study was used meaning data was collected without manipulation or implementing measure of change. The sole purpose of the non-experimental study was to observe and describe the factors associated with home deliveries in katondwe, Luangwa district. The research design will be non-experimental because only one group of persons will be used mainly women who have given birth before.

#### Research Setting

Research setting is the physical location and condition in which data collection takes place in a study (The Practice of Nursing Research, 2005). The study will be carried out in katondwe, Luangwa district.

#### Study Population

The study population refers to the entire number of units or the whole or the inhabitants.

The study population will be women who have given birth before, this is also where the study sample will be selected from.

#### Sample Size

A sample size is a subset of the population selected to participate in a research study. In this case, we the researchers will purposely target the women who have given birth before and still in reproductive age believing that they are a reliable group for the study.

#### Sample Selection

A sample denotes the selected group of people or elements included in a study. Sampling is the process of selecting a portion of the population to represent the entire population in the study.

In selecting the respondents a purposive sampling will be used based on their experiences and inclusion criteria. Purposive sampling is where the researcher purposely targets a group of people believed to be reliable for the study.

#### Sampling Method

Sampling is the selection of a group of people, events, behaviours or other elements with which to conduct a study.

#### Data Collection Tool

Data collection tool is an instrument used to gather information needed to address a research problem.

A data collection tool may take a form of a questionnaire, an interview schedule, checklist, observation or focus group discussion. The instrument used in this study was a semi structured questionnaire with closed and open ended questions.

#### Advantages of a Questionnaire

- The interview can be used for both literate and illiterate people.
- The interviewers can produce additional information through observation
- The interviewers are less prone to misinterpretations by the respondents

#### Disadvantages of a Questionnaire

- The presence of the interviewer can influence the respondent's response.
- The interviewers may interpret non-verbal behaviors.
- The researchers will need special effort to test for validity and reliability.

#### Validity

Validity is a measure of truth or accuracy of a claim, is an important concern throughout the research process. Validity

also refers to the degree to which an instrument measures what it is intended to measure. In this study the researchers ensured validity by pre-testing the structured questionnaire in a pilot study done in a different study setting. The pre-test helped to make changes or adjustments in the questions or structure of the questionnaire in order to collect relevant data in the actual research.

### Reliability

This is the consistency of a measurement, or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects. In this study, instrument reliability will be ensured by standardizing the data collection instrument.

### Data Collection Technique

Data collection technique is the method or way used to gather or collect information needed to address a research question or problem.

Data collection technique is described as objective and systematic. Here, 'objective' means that the data must not be influenced by anyone who collects it. 'Systematic' means that the data must be collected in the same way by anyone who is involved in the collection. In this study, data will be collected through administration of questionnaires to the respondents who will show willingness to participate.

### Pilot Study

A pilot study is a small-scale dress rehearsal that proceeds as if it were the actual study except for the fact, that subjects who will participate in the actual study are not used.

This was used to pre-test the data collection tools. In our case the structured interview questionnaire. This ensured that, the questionnaires were answering the specific research questions and if not the tool was to be amended to facilitate validity and reliability. It also helped the researchers to work on their biases if any. Since the total number of research participants was 50, 5 participants were conveniently selected for the pilot study.

### Ethical and Cultural Considerations

Research ethics is defined as a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal and social obligations to study participants. Prior to conducting the research, the researchers obtained or sought written consent or permission from all levels of authority: this was from the Principal Tutor at St. Luke's College of Nursing and Midwifery, Mpanshya. The nature and purpose of the study was explained to the subjects before the interviews and participation was on a voluntary basis; hence consent was obtained from the respondents. Confidentiality and anonymity was ensured by using serial numbers or initials on the interview schedule (questionnaire) instead of names.

### Plans for Data Analysis

Data analysis deals with the interpretation and conclusions that are drawn from the study, reports how the data will be classified scientifically, placing items that have similar attributes together in one class and orders, manipulated and summarized in order to answer the question under study. The analysis will be done using a data master sheet on which all respondents will be tallied. A portable scientific calculator will be used and presentation of data will be done in tables, bar graphs and pie charts.



## Chapter 4

### Data Analysis and Presentation of Findings

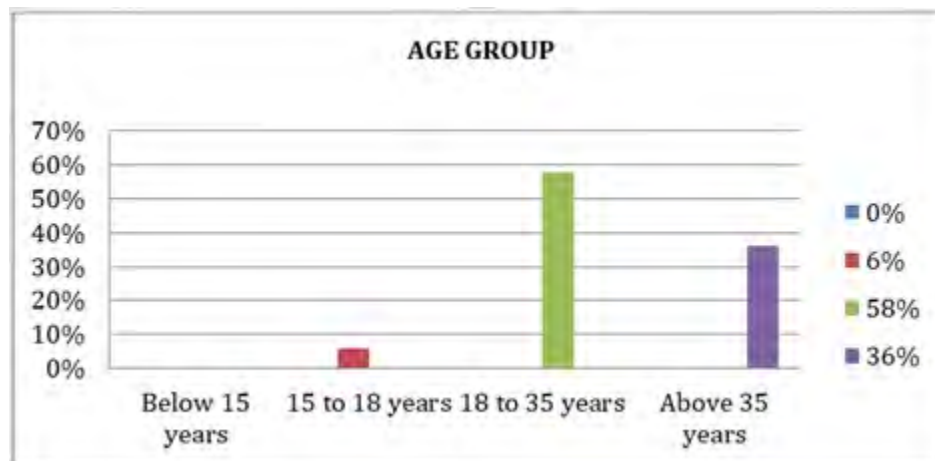
#### Data Analysis

The raw data was collected, sorted out and then grouped into categories. The questionnaires were edited for completeness, uniformity, accuracy and consistency and then data was coded.

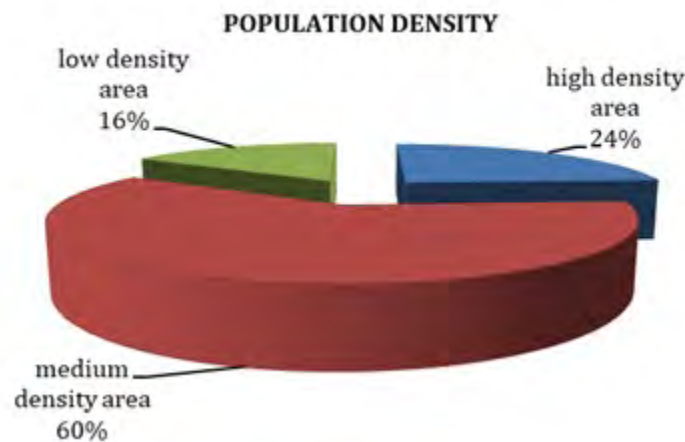
The responses from the questionnaires were entered on excel master sheet and the analysis of data was done manually using a scientific calculator.

#### Statistical Analysis and Presentation of Findings

The findings of the study are presented in percentages, bar graphs and pie charts. The use of graphs and bar charts in the presentation of the findings will make the work presentable and easily understood by the readers of the research study (Figures 1-41).



**Figure 1:** Shows the percentages of the different age groups as shown below.



**Figure 2:** Is a pie chart representing the population of the area in which the respondents live in percentages.

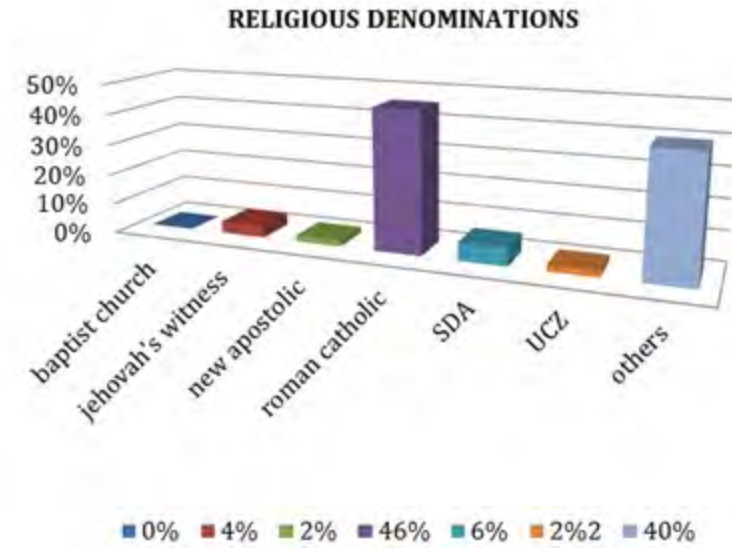


Figure 3: Represents the religious denominations of the respondents in percentages.

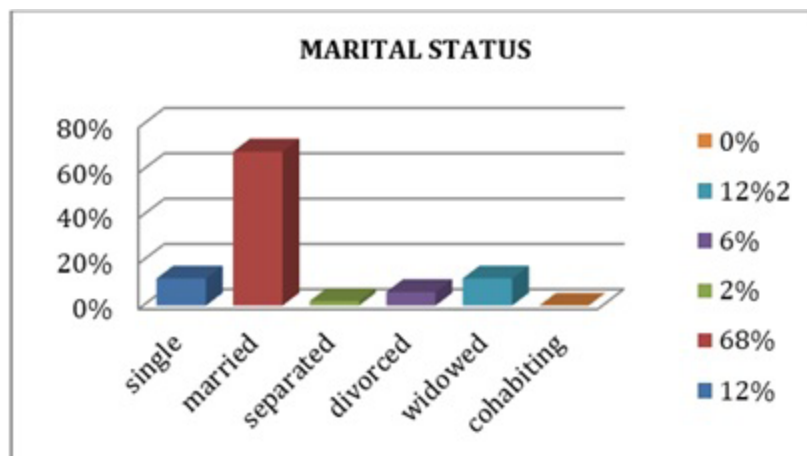


Figure 4: Shows the marital status of the respondents in percentages.

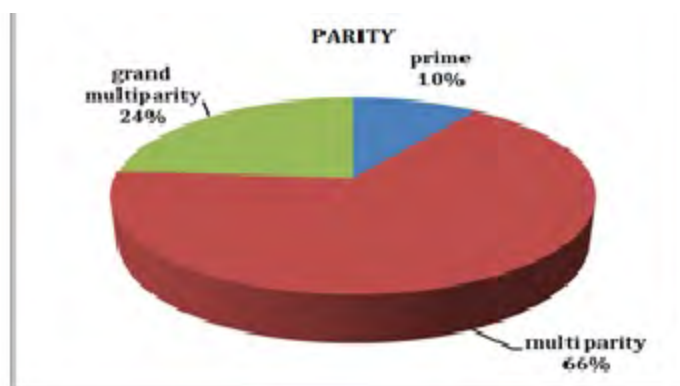
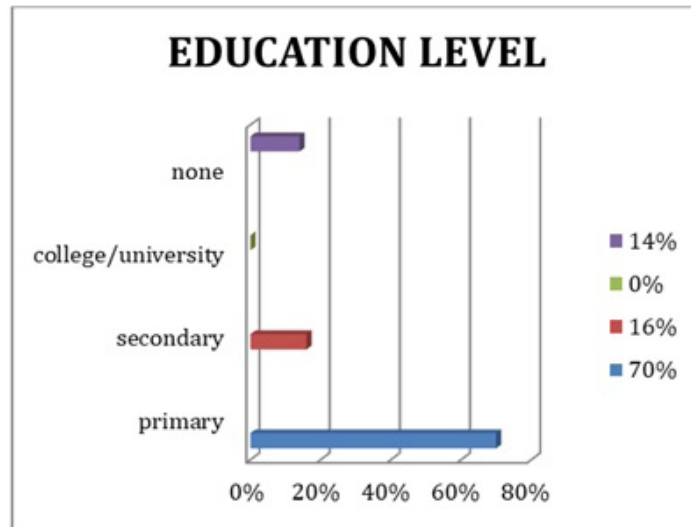
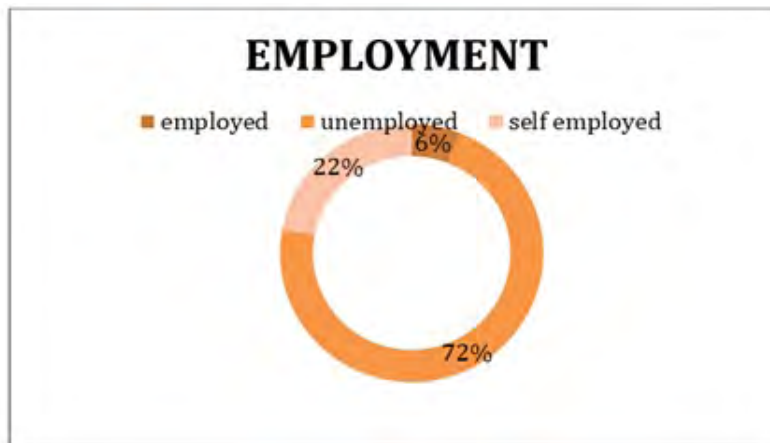


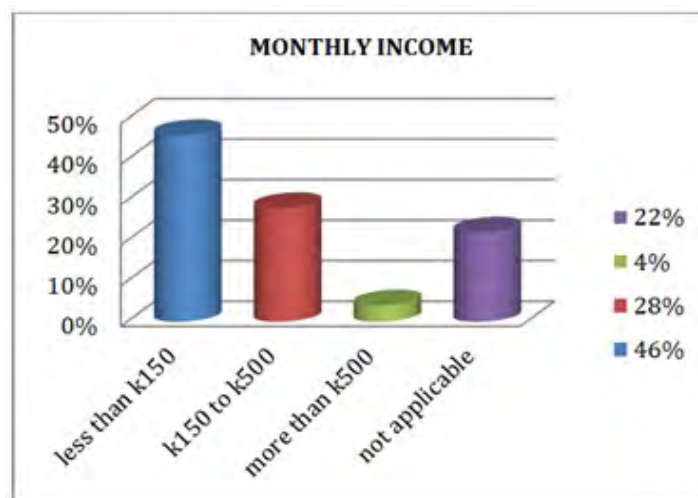
Figure 5: Shows the parity of the respondents in percentages.



**Figure 6:** Is a bar graph representing the education level of the respondents in percentages.



**Figure 7:** Is the employment status of the respondents in percentages.



**Figure 8:** Is a graph representing the percentages of the monthly income of the respondents.



Figure 9: Represents the occupation of the respondents husband's in percentages.

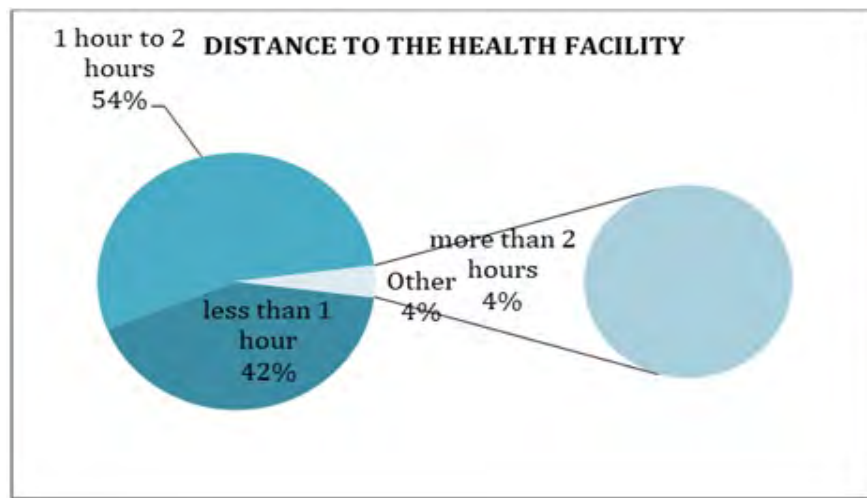


Figure 10: Represents the distance in hours that the respondents travel to reach the health facility.

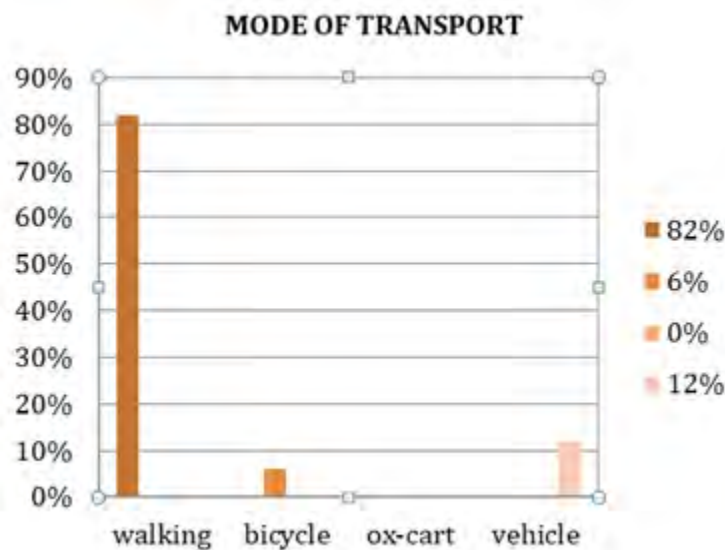
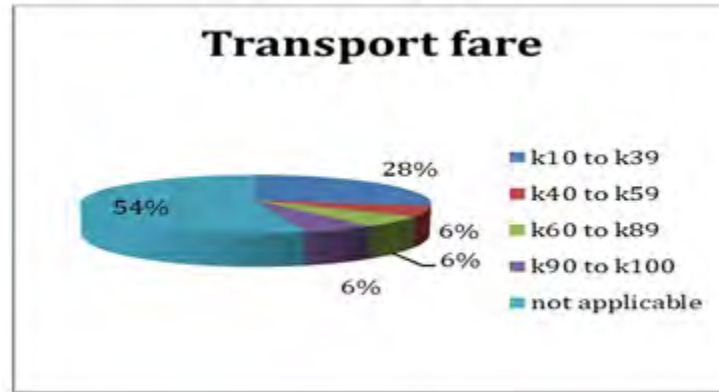
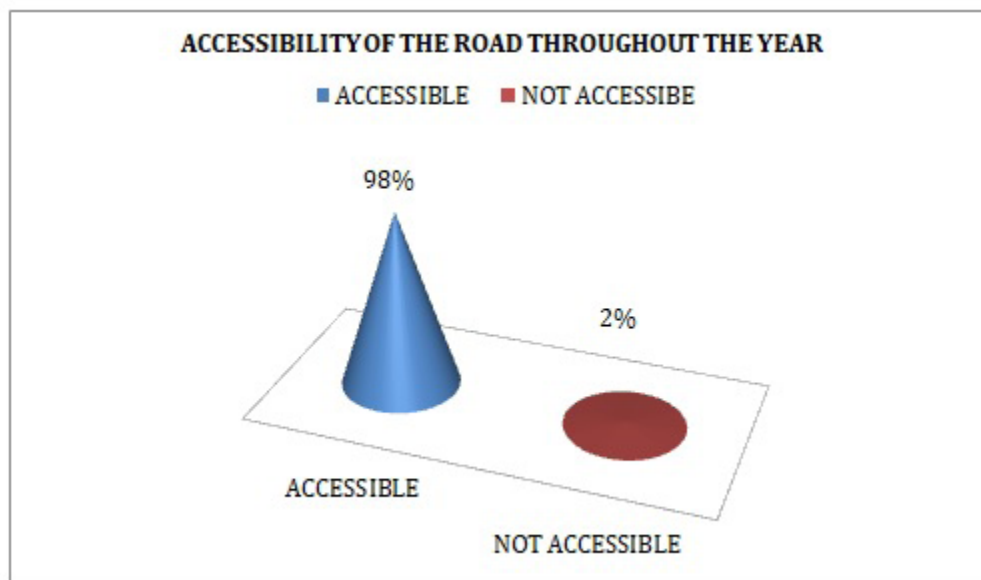


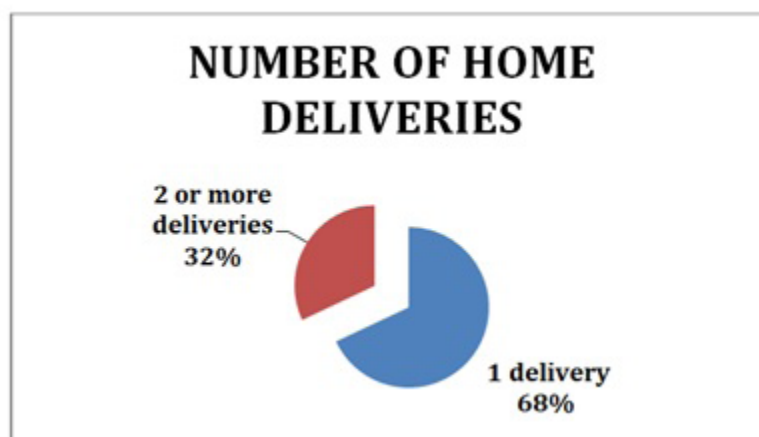
Figure 11: Is a graphical representation of the different modes of transports that the respondents use to reach the health facility.



**Figure 12:** Is a pie representing the transport fare that the respondents pay to reach the health facility.



**Figure 13:** Is a representation of the accessibility of the road by the respondents throughout the year.



**Figure 14:** Is a representation of the number of home deliveries that the respondents have ever had.



Figure 15: Is a graph representing the respondent's preparedness for the pregnancy.

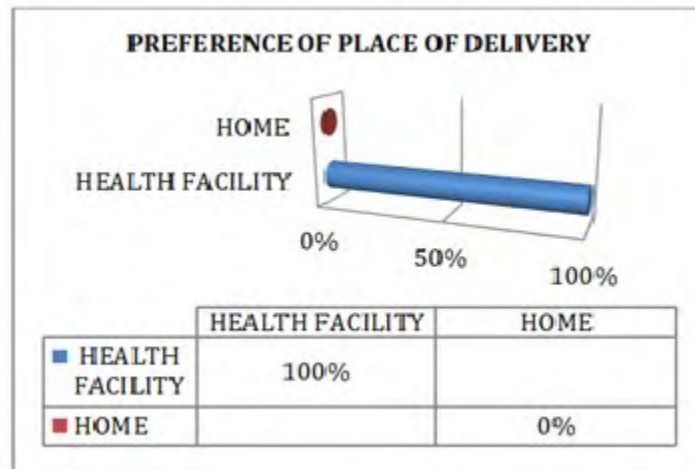


Figure 16: Is a graph which is representing the place where the respondents prefer to deliver from.

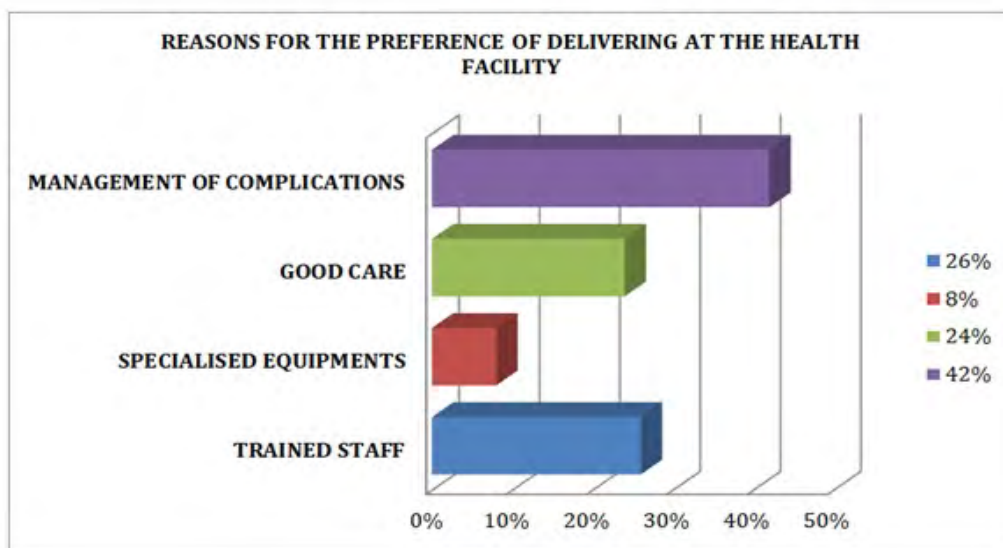


Figure 17: Is a graph which is representing the reasons for the preference of delivering at a health facility.

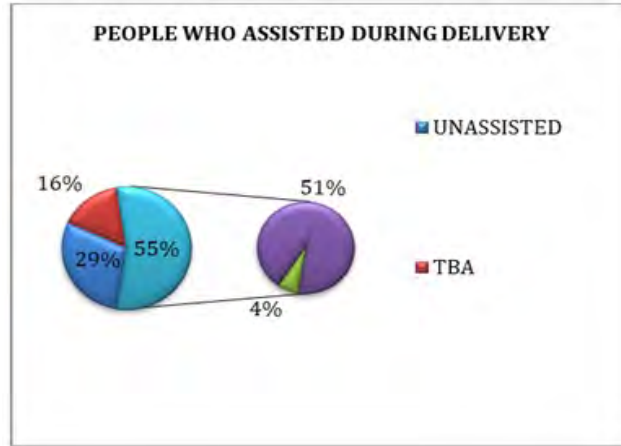


Figure 18: Is a pie which is representing the people who assisted the respondents during the home delivery.

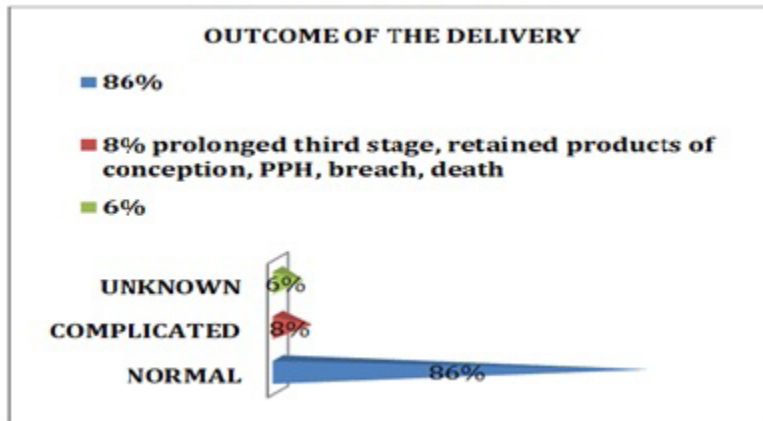


Figure 19: Represents the respondent's outcome of labour.

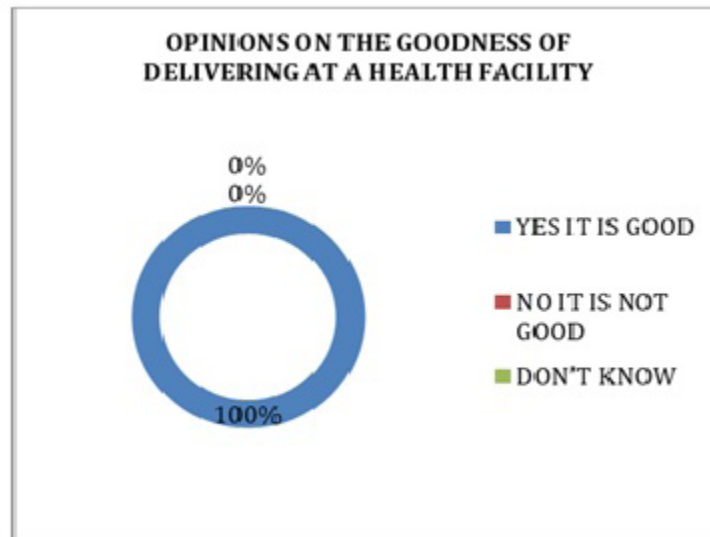
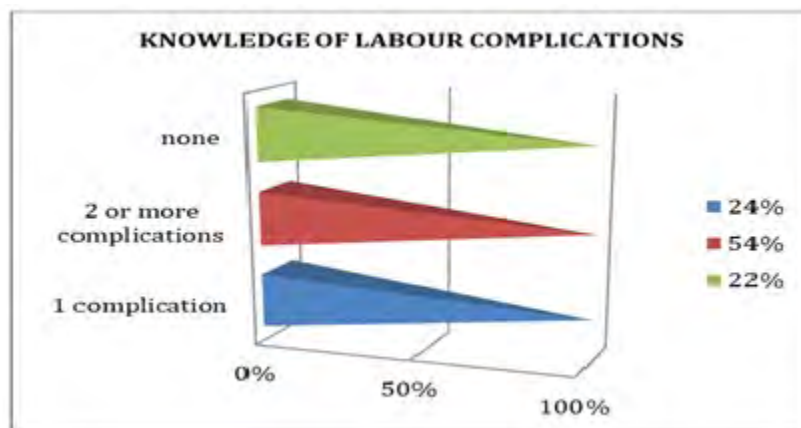


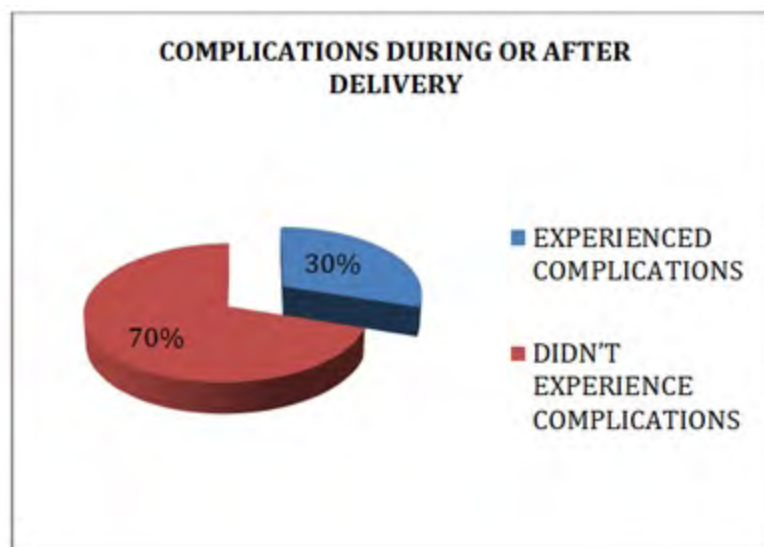
Figure 20: Represents the respondent's opinions on the goodness of delivering at the health facility.



**Figure 21:** Is a graph representing the awareness of delivery complications by the respondents.

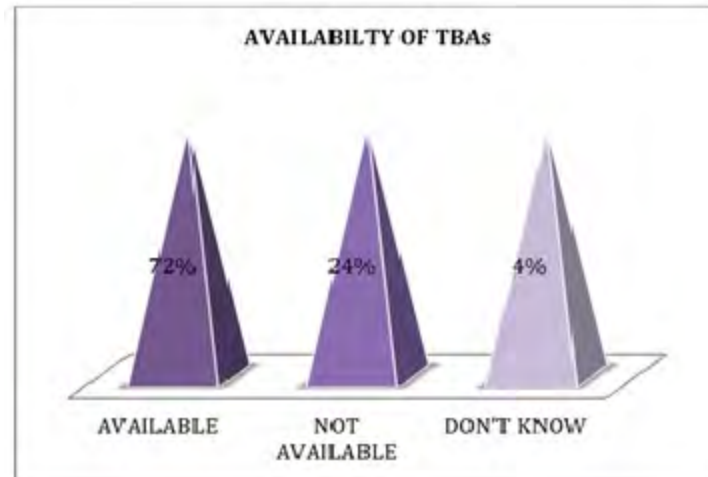


**Figure 22:** Respondents knowledge of labour complications.

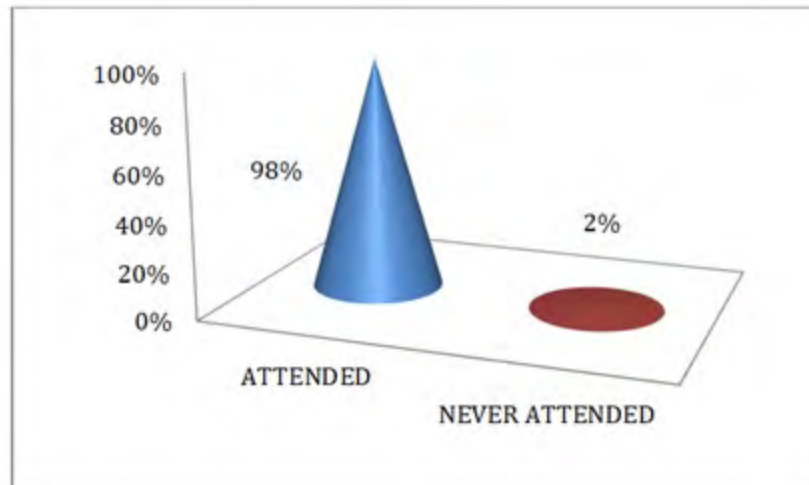


**Figure 23:** Is a pie chart representing the complications experienced by the respondents during or after the delivery.





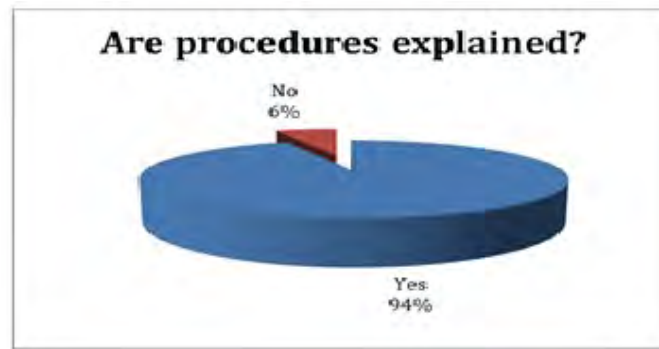
**Figure 24:** Represents the respondent's awareness of the availability of trained TBAs in there.



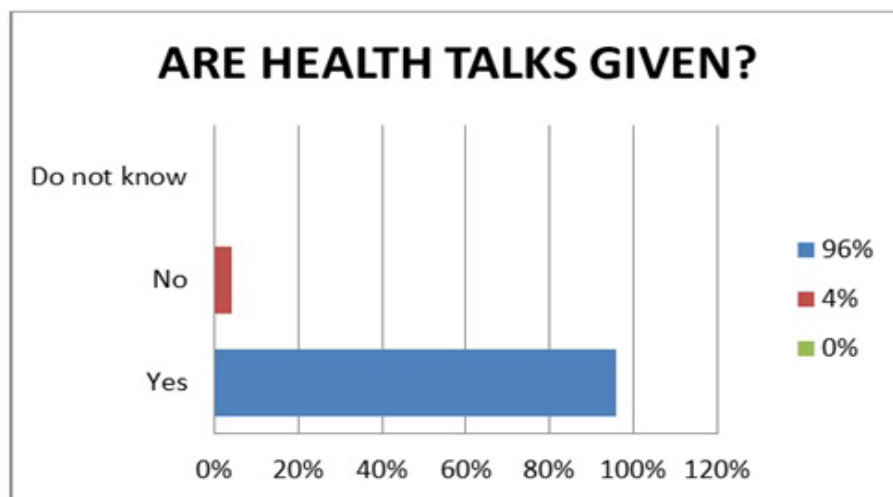
**Figure 25:** Antenatal attendance; is the antenatal attendance record of the respondents.



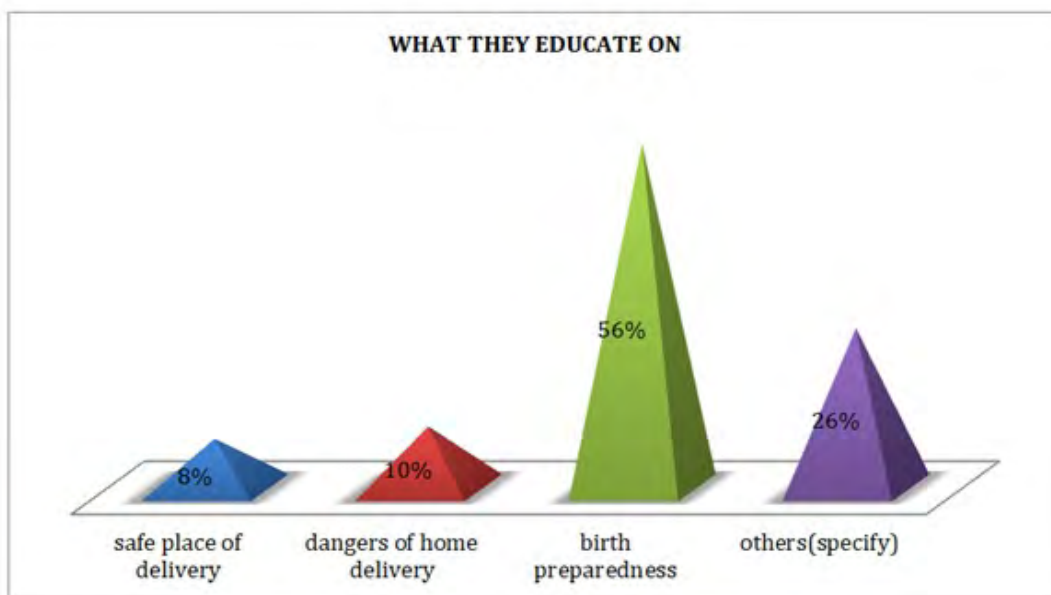
**Figure 26:** Is a graph representing the attitude of staffs towards pregnant women during antenatal at the health facility.



**Figure 27:** Is a pie chart showing the explanation of procedures to the clients during antenatal visits.



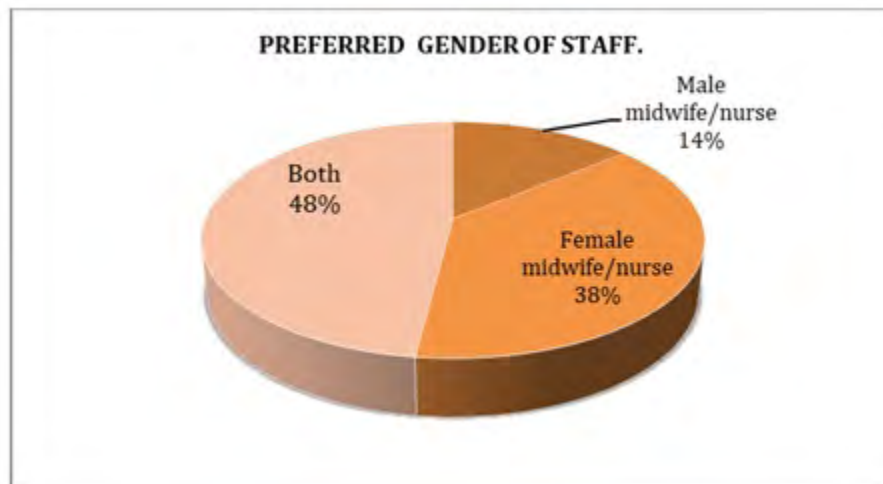
**Figure 28:** Is a bar graph representation of whether health talks are given or not during antenatal visits.



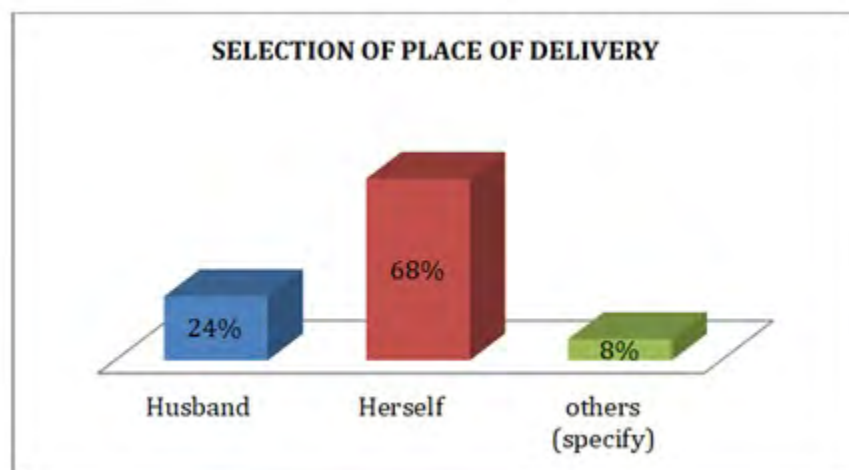
**Figure 29:** Represents what clients are educated on during antenatal visits.



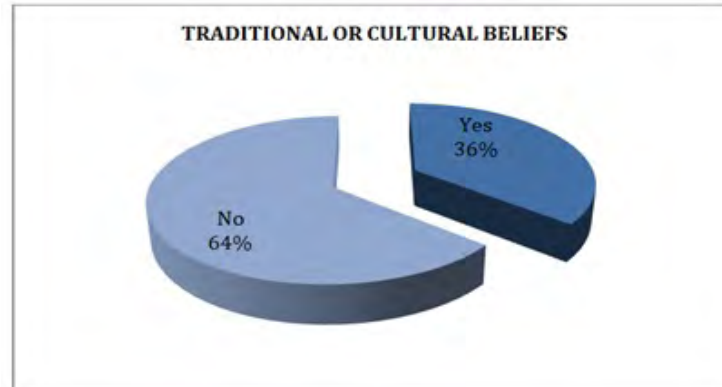
**Figure 30:** Represents the time that nurses/midwives spend on health talks.



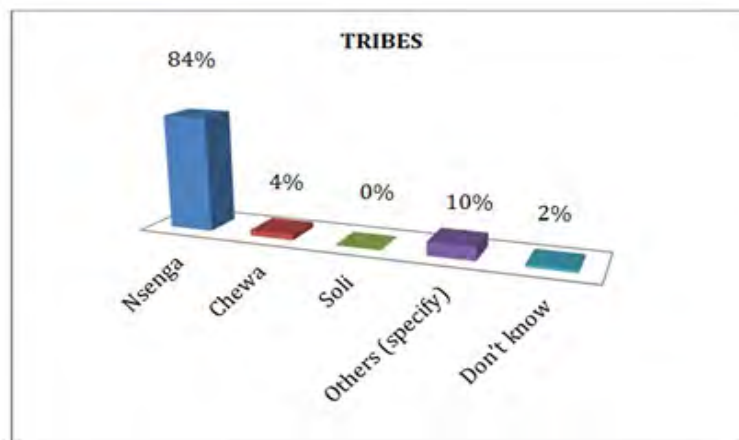
**Figure 31:** Represents the client's preferred gender of staff to assist them during delivery.



**Figure 32:** Represents who decides the respondent's choice of place of delivery in the family.



**Figure 33:** Represents the traditional/Cultural beliefs and/or values that may influence the respondent's preference of the place of choice of delivery.



**Figure 34:** Is a graph representing the respondent's tribes.



**Figure 35:** Represents the traditional practices that the respondents engage in.

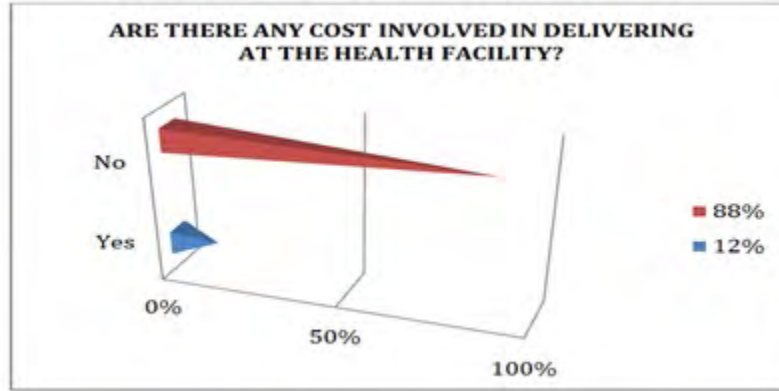


Figure 36: Represents the costs/fees involved in delivering at the health facility.

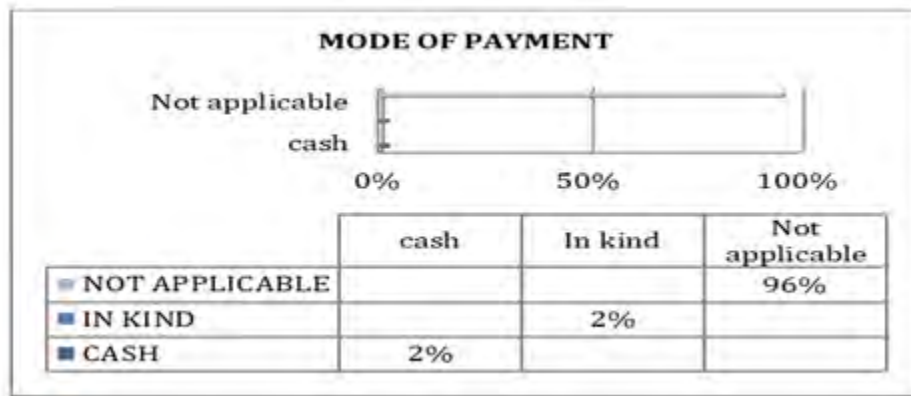


Figure 37: Represents the mode of payment for the costs/fees involved in delivering at the health facility.

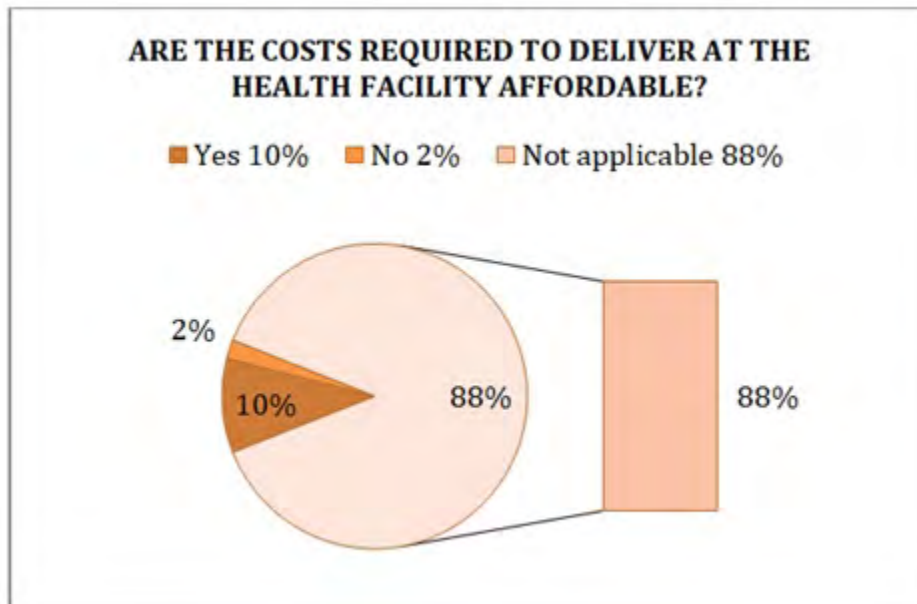


Figure 38: Represents the affordability of the costs required to deliver at the health facility.

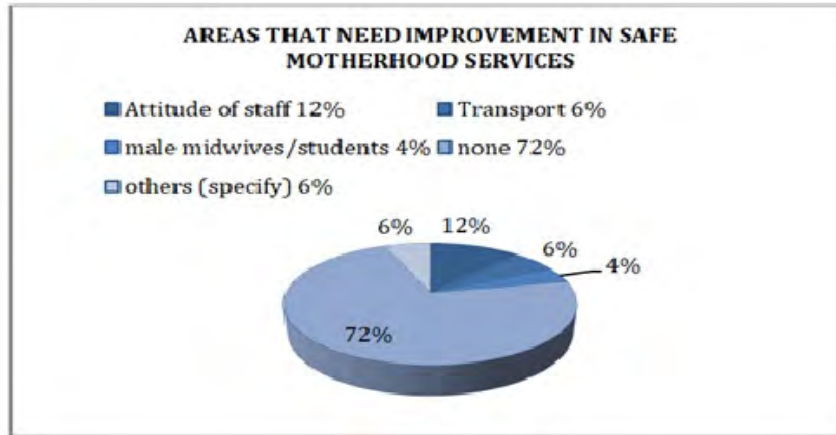


Figure 39: Represents the affordability of the requirements needed for delivering at the health facility.



Figure 40: Represents the respondent's views on the need to improve safe-motherhood services...?

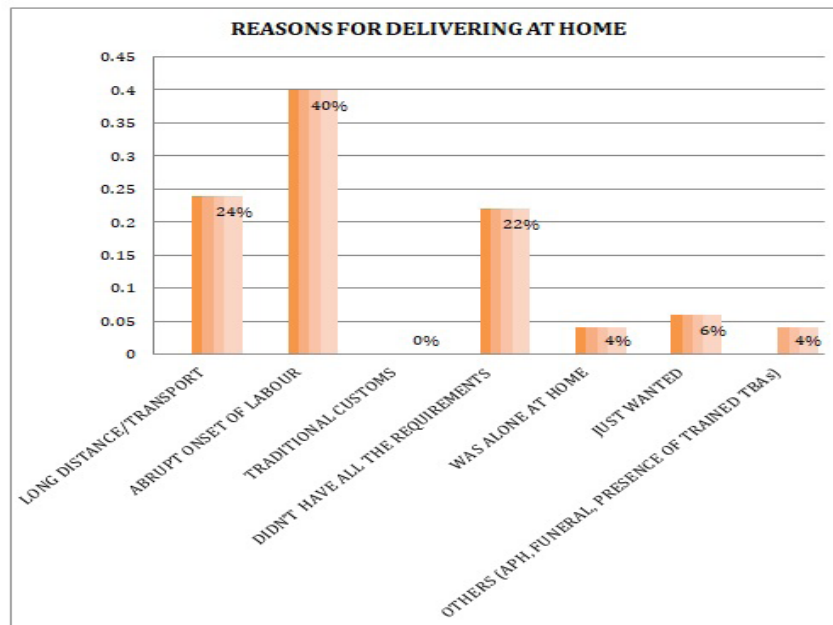


Figure 41: Represents the respondent's reasons for delivering at home.

## Chapter 5

### Discussion and Interpretation of Findings

#### Introduction

The research study was done to determine the factors that are associated with home deliveries among women of child bearing age or who have had a previous home delivery in the last one year in katondwe, Luangwa district. The topic was chosen in order to enlighten the public and the readers of this research document on the factors that contribute to women in the child bearing age delivering from home and not the health facility and in order for the health care providers and the public at large to direct their efforts to reduce the number of home deliveries on the identified factors.

The study sample consisted of 50 respondents who were randomly sampled and interviewed using a structured questionnaire. The sample comprised women in the child bearing age who have had a recent delivery or previous deliveries at home.

#### Characteristics of the Sample

The study subjects were women in the childbearing age of 15 to 35 years with an inclusion of those who were beyond this age group but had a recent or previous home delivery a year ago. The majority 58% were aged between the age of 18 to 35 years with the mean age 36% being above 35 years whilst the least being 6% between the age of 15 to 18 years. The majority of the respondents 68% were married. In terms of religious denominations, the majority were Catholics representing 46% followed by 40% being those from different Pentecostal churches and the least 2% belonged to the united church of Zambia and new apostolic church. 70% of the respondents attained primary education with 16% progressing to secondary education whilst the remaining 14% had never attained any formal education. The majority were unemployed representing 72% whilst the least being 6% represents the employed and 22% those who are self-employed. Those who had a monthly income of more than k500 were only 4% those with less than k150 were 46% and those who had no monthly income at all represented 22%.

#### Parity of the Respondents

The majority of those implicated in home deliveries were mostly multiparous women followed by grand multiparous women and the least were primi-parous women. This

can be attributed to the fact that multiparous and grand multiparous women have had much experiences in terms of delivery and must have had one or more successful deliveries at home therefore making them feel more competent enough to deliver from home and shun delivering at the health facility but for a prime this is the first time that she is having a delivery and is very much uncertain of a lot of things involving delivery therefore most of them choose to deliver from the health facility.

#### Level of Education of the Respondents

The majority of the respondents 70% only attained primary education followed by 16% who attained secondary education and last of all 14% who never even attained any formal education. Among those who attained primary and secondary education, none was reported to have gone to college. The study has therefore proved that education is amongst the factors that are associated with one's influence on the choice of place of delivery as most of the respondents were not very educated.

#### Income/Poverty

According to the study, 72% of the respondents were unemployed, 6% were employed and 22% were self-employed. The monthly income was 4% for those who were earning a monthly income of more than k500, 28% for those who earned between k150 to k500, 46% earned less than k150 and 22% represents those who never earned anything at all. The majority of the respondents were therefore not employed and the majority earned less than k150. One can therefore deduce that because the majority were unemployed and had a low monthly income, they failed to find the means for transportation to reach the health facility and may not have had enough requirements for the baby and would therefore be ashamed to deliver at the health facility.

#### Costs Involved for Delivering at the Health Facility

When asked if there were any costs involved for one to deliver from the health facility, 12% of the respondents said yes whilst the remaining 88% said no there were no costs. When further probed if these cost were affordable 10% were found to be in agreement that the costs were affordable while only 2% were in disagreement that they were not affordable

and for the rest of the respondents 88% the question was not applicable to them since they didn't pay anything for them to deliver from the health facility. The mode of payment for these costs was said to be either in cash which represents a 2% or in kind representing a total of 2% with 96% being those to whom the question was not applicable. In terms of other requirements that are needed such as jik, gloves, a plastic for delivery and the babies clothes, 70% said they were able to buy these requirements or pay in kind while 30% said they were not able to meet these requirements and would therefore rather deliver from their own homes where they wouldn't be required to buy or pay anything. They further added that, if they didn't meet these requirements, they would be shouted at, at the health facility therefore many would shun going to deliver from the health facility. The study has therefore revealed that the costs required to deliver from the health facility are very affordable and that only a few wouldn't manage to do so and this might just be due to laziness on the part of such people.

### Distance to the Health Facility

54% of the respondents were reported to take 1-2 hours to reach the health facility, 42% took less than an hour whilst 4% of the respondents took more than two hours. In addition 82% of the respondents walked to reach the health facility, 6% used a bicycle while 12% used a vehicle. According to these findings the distance or time taken to reach the health facility contributes to one delivering from home or on the way due to transport difficulties.

### Preferred Gender of Staff during Delivery

In terms of the respondent's preferred gender of staff to assist them during delivery, the majority 48% preferred both male and female nurses/midwives to assist them during delivery while 38% preferred only female nurses/midwives to assist them and last of all 14% preferred only male nurses/midwives to assist them during the delivery process. According to the views of the respondents who chose only female nurses/midwives to assist them during the delivery process, they were more comfortable and open to be assisted by a nurse or midwife of the same sex as most of them would feel shy being assisted by a nurse or midwife of the opposite sex while for others it was just unacceptable according to their beliefs. Others preferred female nurses/midwives arguing that females are very kind and understanding because they all go through the same labour process as opposed to the males. For those who preferred both male/female nurses/midwives their reasons for such a preference was that both staffs are good and that it is their job for which they were trained therefore they found no problem being assisted by either of the two. The minority of the respondents who only preferred male nurses/midwives said the males

are more kind, respectful and understanding than females, arguing that it is rare for a male nurse or midwife to shout at a woman in labour as compared to females. According to these findings, gender issues were not the main reasons why one would prefer to deliver from home as the majority 48% had no problems with either of the two genders of staff assisting them during the delivery process. In addition one would not so much as predict the gender of staff that they are going to find at the health facility. Therefore, for one to say that they delivered from home because of a certain gender of staff who was on duty on that day would just probably be a cover up and not necessarily the main reason why they chose to deliver from home. And according to figure 41.0 of chapter 4 on the reasons why the respondents delivered from home, none of the respondents were reported to deliver from home because of a certain gender of staff that would be on duty on that particular day.

### Who Influences the Respondents Choice of Place of Delivery

According to the study, 68%, representing a total of 34 respondents had no one in the family or elsewhere influencing their choice of place of delivery. 24% of the respondents representing a total of 12 respondents were influenced by their husbands to either deliver from home or the health facility. 8%, representing a total of 4 respondents and being the least had their relatives or in-laws influencing their choice of place of delivery. This means that only 32% of the respondents had someone in the family who had a higher influence on their choice of place of delivery. Of which only a total of 12 respondents were influenced by their husband meaning that gender only carries a very small fraction as to why one would choose to deliver from home.

### Respondents Preferred Choice of Place of Delivery

The study reflected that all the respondents who were interviewed preferred to deliver at a health facility giving us a percentage of 100%. The majority reasons for such a preference were that; the health facility aids in proper management of complication and that the health facility has trained staff members and also offers good care during delivery.

Despite respondents being prepared for the pregnancy, which was at 68% and those not prepared being at 28%, the number of home deliveries were still at peak with respondents who had 1 home delivery being at 68% while those with two or more being at 32%. Contributing factors for home deliveries were abrupt onset of labour which was at 40%, long distance from home to the health facility was rated at 24% and other factors such as not having the required



baby layette and other material which was rated at 22%. Others were alone at home with no one to accompany them to the health facility while others said they just wanted to deliver from home. Last of all, others had other reasons such as having a funeral, presence of a relative who was known to conduct home deliveries and ante partum haemorrhage.

### Cultural/Traditional Beliefs

The majority of the respondents were Nsenga by tribe which was at 84% and Chewa being at 4% and other tribes being at 10%. Luangwa being a rural place 62% of the respondents engaged in traditional practices while 38% did not. Nevertheless, traditional beliefs still did not influence the respondent's preference of place of choice of delivery as 64% chose no while 36% chose yes.

### People who Assisted During Home Deliveries

4% represents the respondents who were assisted by midwives and nurses, 16% represents those who were assisted by TBAs while 29% represents those who were not assisted during their home delivery and finally 51% represents those who were assisted by others such as aunt, mother, grandmother, neighbour and passer-by.

This means that the majority of people denoted by 51% were assisted by their neighbours, relatives and passer-by as it was said by some of them that they delivered on the way to the health facility with some of the reasons being that the distance from their homes to the hospital is quit far and some being that they did not know they were in labour until a later time which was late hence they either delivered on the way to the hospital or from the field farming. The 29% of the people were not assisted as they have had more than one home delivery with this experience they felt competent enough to deliver from home by themselves again. 16% were assisted by TBAs from the information we got they gave reasons of not having money for transport as the hospital was far from their homes this made them arrange with the TBAs they knew in their area and lastly the 4% being assisted by midwives and nurses explained .

### Outcome of Home Deliveries

86% shows the percentage of the people whose home delivery had a normal outcome while 8% had complications and 6% represents those respondents who did not know the outcome of their delivery. This information means that most of the respondents being represented by 86% had a normal outcome with their home delivery without complications as these were either assisted by trained TBAs or someone who

had experience in assisting someone to deliver while those being represented by 8% had complications during their home delivery of which some of them managed to intervene and the babies were born alive while others were rushed to the hospital where the delivery was completed unfortunately their babies did not survive as they went late to the hospital leaving the health team with less time to intervene and finally the 6% represents the respondents who did not have knowledge of complications that could occur during labour or afterwards hence they gave answers of them not knowing the outcome of their delivery but giving information that their babies were born alive.

### Opinion on the Goodness of Delivering at the Health Facility

All the respondents who were interviewed gave their opinion of delivering at the health facility being the best thing for every woman in labour and this is represented by 100%. This means that all the respondents interviewed concerning our topic of study had a good opinion about pregnant women delivering at the health facility their reason being that the is good care for a woman in labour at the health facility and if anything were to go wrong the health team is competent enough to intervene hence this is denoted by the 100%.

### Awareness of Delivery Complications

78% represents the respondents who were aware of delivery complications and 22% were not aware. Despite this high rate of awareness of labour complications, home deliveries still occur and the reasons for the continued occurrence were attributed to transport difficulties, abrupt onset of labour and personal decisions on the part of the respondents. This calls for both the health care providers and the community at large to work together in order to intensify their efforts and strengthen their policies against the practice of home deliveries.

### Knowledge of Labour Complications

54% shows the percentage of the respondents who had knowledge of 2 or more complications then 24% represents those who knew at least one complication and 22% represents the respondents who had no knowledge of any complications. With this information it was concluded that most of the respondents were well informed on the complications of labour during ANC visit. This is in correlation with the information of figure 28.0 which shows a 96% agreement that health talks are given during ANC visits.

## Complications Experienced During or after Delivery

According to figure 23.0 of chapter 4, 70% of the respondents did not experience any complications while 30% of the respondents experienced complications. For the 30% who experienced complications, the complications experienced could be attributed to the use of unsterilized equipments during and after the delivery, lack of skilled attendance and inadequate knowledge from the person who assisted the delivery such as aseptic technique. This is in line with other research findings which supported that the use of unsterilized equipments and lack of skilled attendance led to a woman experiencing complications during or after the delivery. In terms of the 70% who did not experience any complications, such an outcome could be attributed to the use of aseptic technique, presence of trained TBAs who assisted with the delivery and labour progressing normally without any difficulties. This does not still entail that one should become comfortable delivering from home because the home as a place of choice of delivery has no sterilized equipment and does not give one the guarantee that TBAs will always be available at the time of delivery. In addition, many labour complications can only be managed at higher levels of health care with specialized staff and equipments.

## Availability of TBAs

72% denotes the percentage of respondents who said that TBAs were available in their area of residence while 24% of the people said the TBAs were not available in their area and finally 4% did not know. Despite the availability of TBAs, only 16% of the home deliveries were conducted by them while the rest were assisted by nurses/midwives giving a percentage of 4% and the majority being 80% were either, unassisted or conducted by a relative or passer-by. This could be attributed to the fact that; most TBAs who were interviewed were reported to have started refraining from assisting women in home deliveries because of the new policies which were agreed upon in a quality improvement meeting held in chief Mburuma's chiefdom by Katondwe mission hospital in order to address the identified health problems such as the increasing numbers of home deliveries in the community. The agreed upon measures were to report all women who deliver from home to the nearest local headman or local authorities for punishment.

## ANC Attendance

98% of the respondents attended antenatal during the pregnancy and 2% of the respondents never attended antenatal during the pregnancy. The respondents seemed to have had no problems with the staff or health providers

they found when they went for antenatal, because according to the research we conducted on the staff attitude 92% of the respondents said the attitude was good, 6% said staff attitude was bad and 2% of the respondents said they had no idea whether the staff attitude was good or bad, in this case the majority of the respondents had no problems with the staff attitude.

Looking at the above information, we further asked the respondents if the procedures that were done on them when they went for antenatal were explained to them and the majority said yes, the majority being 94% and 6% said No. We also asked if health talks were given to them during antenatal visits and 96% of the respondents said yes and 4% said no.

The respondents were asked what education was given to them during antenatal visits and the majority being 56% could only remember being educated on birth preparedness, 26% could not remember what they learnt, 10% remembered being educated on dangers of home deliveries and 8% remembered being educated on safe place of delivery and according to the respondents the time spent on health talks was not enough because 50% of the respondents being the majority said the talks lasted less than 30 minutes, 46% said the talks lasted 30 minutes to an hour and 4% said the talks lasted more than an hour, therefore, the time spent on health talks was not very enough which can even be a contributing factor to the respondents delivering at home because they received less knowledge on the importance of delivering at the health facility. According to the research that we conducted it has been observed that the health providers are actually doing their job because the majority of the respondents in almost all the questions asked above seem to have no problems with the services offered to them during antenatal visits, therefore, antenatal services and service providers may not be a contributing factor for home deliveries.

## Areas that Need Improvement

According to the research that we conducted, the majority of the respondents said they had nothing that they think should be improved in their various health facilities of which the majority had 72%, 12% said the attitude of the staff is bad and has to be addressed as it is even the reason why most pregnant women deliver from home, 6% of the respondents said the transport system from their homes to the health facility needs improvement because it is one of the reasons for them delivering from home especially in rain season where the roads are muddy making it difficult for them to reach the health facility, this is therefore a contributing factor to home deliveries. 6% of the respondents had other things that they would want to improve e.g. the health facility

to be providing pregnant women who go to deliver with baby layette and finally 4% of the respondents said they would want only female midwives in maternity wards and if only females can be trained as midwives also not allowing student nurses to be conducting deliveries because they are not free being attended to by the above mentioned health personnel as a result they choose to deliver from home instead of going to the health facility.

### **Implications to the Health Care System**

Home deliveries are dangerous such that they may lead to complications such as neonatal sepsis and other infections like neonatal tetanus due to lack of sterilised instruments during delivery. Moreover it may also lead to high maternal and infant mortality rate due to complications which may arise during delivery as well as due to lack of skill and being incompetent with the delivery procedure. Home deliveries may also increase the risk of mother to child transmission during delivery due to lack of a skill. Furthermore, there are some of the implications which may arise as follows

### **Implications for Nursing Practice**

During the research, it was discovered that home deliveries were not being indicated in the delivery registers and this negatively affects the nursing practice in such a way

that it leads to low delivery coverage data. Moreover, most of the women who deliver from home usually report late to the health facility or don't even report at all because of fear of being shouted at or being reported to the headman or local authorities. As a result if there were any complications during the delivery, the baby might end up having neonatal sepsis there by increasing the morbidity and mortality rates.

### **Implications for Quality**

The quality of nursing care given to the mothers and their neonates that come to the hospital after delivering from home is very much compromised because there is no base line data on the progress of labour hence the care given is out of guess work.

### **Implications to Resources**

It is of no importance training midwives if mothers are delivering at home, in this case, the time for midwives is wasted as well as the obstetric medications that are ordered to be used on the pregnant women during labour, so they expire without being used together with vaccines. The drugs are budgeted for according to the population in that particular area and if women don't show up for delivery that will lead to wasting of resources.

## Chapter 6

### Conclusion, Limitations and Recommendations

#### Conclusion

The purpose of the study was to identify the factors that are associated with home deliveries in Katondwe, Luangwa district. The information gathered is hoped that it will increase the number of deliveries in health institutions and decrease the number of home deliveries in order to reduce morbidities and mortalities among mothers and new-born babies. There was a need to generate information which could be used by nurses, midwives and the health care planners to implement interventions directed at reducing home deliveries and increasing institutional deliveries. In this chapter the objectives of the study were evaluated to determine whether they had been attained. The specific objectives of the study were to;

- Find out why home deliveries are still occurring in rural areas
- Find out which age group is mostly implicated in home deliveries
- Find out if there are any complications that are associated with home deliveries
- Ascertain the availability and accessibility of maternal health services
- Find out if women who deliver from home are aware of the complications which may arise during delivery.

### Reasons Why Home Deliveries Still Occur In Rural Areas

#### Long Distance/Transport Difficulties to Reach The Health Facility

Unlike urban areas, in which health facilities are near to the people's residents and are easily accessible because of improved road networks and availability of different modes of transports such as cars, rural health centres are usually far from the peoples residential areas mainly due to large areas of land that are reserved for cattle rearing and farming activities. The majority of the respondents walked to reach the health facility and usually took about 1-2 hours to reach the health facility while only 12% of the respondents were able to afford a car in order to reach the health facility. Such challenges, coupled with poverty greatly influenced respondent's decisions to deliver from home.

#### Abrupt Onset/Precipitate Labour

Most of the respondents were reported not to have had known or been aware when labour started until such a time that they were able to see the membranes or the foetal head approaching. For others, labour just progressed so fast that they couldn't help but deliver from home. There is therefore a great need to intensify efforts to educate women on the signs and symptoms of the beginning of labour.

#### Income/Poverty

Low monthly income and poverty were also found to be amongst the factors that were associated with home deliveries in katondwe. Most of the respondents were found to have a low monthly income and were found not to have had enough money for transport during the time for delivery. Some were even reported to have delivered on their way to the health facility while others didn't afford to buy all the baby requirements and a plastic, jik and gloves for delivery therefore they felt no need to deliver from the health facility because they are often scolded if they came for delivery without meeting these requirements.

#### Level of Education

The majority of the respondents were not very educated as only 70% had attained primary education, 16% attained secondary education and 14% never attained any formal education. Lack of education also contributed to the respondent's preference to deliver from home due to inadequate knowledge on the importance of hospital deliveries and the many dangers of home deliveries. For others lack of adequate formal education meant that they could not get a formal employment which could help them fend for their families and have adequate resources for the baby requirements and other hospital requirements in order for them to feel able enough to deliver from the health facility.

#### Parity

Multi-parous women were the ones mostly found to deliver from home as compared to primi-parous women. The reasons were that they had other recent deliveries from home without any complications and therefore felt no need to deliver from the health facility.

## Attitude

For others, all the baby requirements, transportation and money for any other costs were very much available but they just decided to deliver from home. Therefore, attitude was also among the reasons why some of the respondents delivered from home.

## Unforeseen Circumstances

Others were on their way to the health facility when suddenly the car broke down before they even reached the health facility. Another of the respondents said that they had a funeral during the time that labour pains began and could not go because of the funeral while others had the membranes rupture from home and therefore thought that if they were to make an attempt to the hospital they would have delivered on the way.

## Age Group Mostly Implicated In Home Deliveries

The age group which was found to be mostly implicated in home deliveries was found to be between 18-35 years of which most of these respondents were multi parous women who had many experiences with delivery and therefore felt competent enough to deliver from home.

## Complications Associated with Home Deliveries

According to our research findings, only a few of the respondents were reported to have had complications during the home delivery. The few complications experienced were; retained products of conception, PPH, prolonged third stage of labour, neonatal sepsis and lastly one of the respondent was reported to have had a neonatal death during the twin delivery which she had at home.

## Availability and Accessibility of Maternal Health Services

Maternal health services such as antenatal care, intrapartum care and post-partum care were found to be available and very accessible for every woman seeking such services in katondwe, Luangwa district [6-9].

## Respondents Awareness of Delivery Complications

78% of the respondents were very much aware of complications which might arise during delivery. For such respondents, their reasons for delivering from home were

not attributed to health education but other factors such as a personal decision to deliver from home.

## Limitations of the Study

The following were the limitations of our study;

- The study was only limited to women who had a recent or previous delivery from home
- Inability to interview TBAs who might have helped us with the much needed information

The hospital never had adequate records on home deliveries

- Lack of resources such as transport to reach other remote areas in Katondwe
- Other respondents who refused to take part in the study
- Time for submission was limited

## Recommendations

The recommendations will focus on the aspects which could enhance the number of institutional deliveries in katondwe and on issues which could be addressed by future researchers.

Institutional deliveries in katondwe based on the research results, might be enhanced if the following recommendations could be implemented;

- The community to take an active role in encouraging women to deliver from health institutions and reporting those who deliver from home to the nearest headman.
- Providing baby layette and baby clothes to mothers who deliver from health facility.
- Having more time for health education during antenatal visits.
- All health institutions to have a mothers shelter where pregnant women could spend their last week of pregnancy in preparation for delivery.
- The chiefs and the local authorities to strengthen their policies against home deliveries.
- In-service training programs should address nurses'/ midwives' attitudes towards pregnant women during antenatal and labor.
- Future studies should investigate;
- The quality of ANC services
- The role of TBAs
- Client's satisfaction with maternal health services
- Effectiveness of communication between midwives/ nurses and clients

## Plans for Dissemination of Findings

Dissemination of findings will be done through

submission of this Manuscript to Texila for onward publication in the journals.

### Acknowledgment

First, acknowledgement goes to God Almighty for giving us strength and wisdom and the competence for carrying out this research project. Also the 50 respondents for their time and participation throughout our research project.

### Declaration

I declare that the factors associated with home deliveries in Katondwe Luangwa District, Lusaka Province, Zambia is my work and that all sources that we used have been indicated and acknowledged by means of complete references.

### Statement

I hereby do certify that this study is entirely the result of my own independent investigations. The various sources to which I am indebted are clearly indicated in the text and references.

### Dedication

I dedicate this research project to everyone whose tireless efforts have significantly contributed to the reduction in the number of home deliveries and most of all, to the wonderful people of Katondwe who enabled me to carry out this project without whom this research project would not exist.

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