

KNOWLEDGE AND PERCEPTION OF WOMEN TOWARDS DANGER SIGNS IN
PREGNANCY IN CHOMA RURAL DISTRICT

BY
Nambala Brenda Sianchapa
BSc.N, RM, RN

A DISSERTATION SUBMITTED TO THE UNIVERSITY OF ZAMBIA IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF
SCIENCE IN NURSING

University of Zambia
Lusaka
March, 2010

DECLARATION

I declare that this Dissertation is my own work and that all the sources I have quoted have been indicated and acknowledged using complete references. I further declare that this Dissertation has not been previously submitted for a diploma, a degree or for any other qualifications at this or any other university. It has been written according to the guidelines for Master of Science in nursing Degree dissertations of the University of Zambia.

Signed.....Date.....

Candidate

Signed.....Date.....

Supervisor

CERTIFICATE OF APPROVAL

The University of Zambia approves this Dissertation on knowledge and perception of women towards danger signs in pregnancy in Choma Rural District in partial fulfillment for the requirements for the award of a Master of Science in nursing Degree.

Examiner's signature.....Date.....

Examiner's signature.....Date.....

Examiner's signature.....Date.....

DEDICATION

To the nursing and midwifery profession, women who have experienced obstetric complications and the important people who have been a source of inspiration in my life;

My mother, Rabecca Maabu.

My husband, Josephat Sianchapa.

My sons Choolwe Wesley, Lweendo Josephat Jnr and Luyando Elijah.

My daughter, Mutinta Jemimah.

My older sister, Irene.

ACKNOWLEDGEMENTS

My heartfelt gratitude goes to my Lecturers and research supervisors, Mrs C. Ngoma and Dr. M. Maimbolwa, who tirelessly and patiently guided me throughout the research process.

My sincere thanks also go to the following;-

The Ministry of Health, for sponsoring my studies.

Mr. S. K. Ng'wane, Manager Planning and Development, Mrs M. Mudenda, the Choma District MCH Coordinator and other staff at DHO for availing me with the data which I needed and for providing me with a vehicle for data collection.

My friends and classmates, who encouraged me and gave me the moral support which I needed,

My family, for their continued support, understanding and encouragement throughout my period of study.

Lastly but not the least I thank my God who guided me, saw me through hard times, and gave me the strength to conduct the research (psalm 23:1). Hallowed be His name.

ABSTRACT

Pregnancy is usually an exciting time in the life of a family. It is a joyous event for most families as they anticipate bringing new life on earth.

Sometimes a pregnant woman may experience signs and symptoms which signal danger. Danger signs in pregnancy are those signs that a pregnant woman will see, or those symptoms that she will feel which indicate that something is going wrong with her or with the pregnancy.

Recognition of danger signs in pregnancy by pregnant women and their communities is the essential first step in accepting appropriate and timely referral to obstetric and newborn care. This can in turn help reduce maternal mortality as women will seek medical care on time.

The aim of this study was to determine knowledge and perception of women about danger signs in pregnancy. The study was conducted in Choma rural district. A cross-sectional, descriptive study design with both qualitative and quantitative approach was used. The study population was the women of child bearing age residing in Choma rural district who had given birth before or those who were pregnant at the time of the study. A sample of 186 respondents was systematically sampled from 3 villages at Mapanza health center catchment population. Two Focus Group Discussions (FGDs) were conducted at the health center. Interview schedules and focus group discussion guide were used to collect data for a period of one month.

Data analysis was conducted using Statistical Package in Social Sciences (SPSS) version 16 software, and data were presented using frequency tables, pie charts, histograms and cross-tabulations. Data from open ended questions were categorized, coded, entered and analyzed using SPSS version 16. Data from closed ended questions was coded, entered and analyzed using SPSS version 16. Chi square test was used to test for associations between independent and dependent variables. FGDs were analyzed by content analysis and the most useful information that emerged from the discussions was selected and used to illustrate the main points.

The study revealed that 66% respondents had heard about danger signs in pregnancy, and that 66.7% had positive perception about them. The study however revealed that majority (71%) of the respondents had low levels of knowledge.

The study revealed significant associations between women's knowledge about danger signs in pregnancy and education level (40%, p value=0.006) and between age and knowledge about danger signs in pregnancy (37.5%, p value=0.017). Occupation was also associated with women's knowledge of danger signs in pregnancy (45.5%, p value=0.002), as well as quality of services (80.8%, p value=0.000). Marital status was significantly associated with women's perception towards danger signs in pregnancy (82.7%, p value=0.009), as well as cultural beliefs (58.4%, p value=0.000). The results were disseminated to relevant stakeholders after data analysis.

This study recommends that the Ministry of Health should put in place measures to strengthen Information Education and Communication (IEC) programs in all health facilities to increase knowledge about danger signs in pregnancy among women and this will also improve their perceptions. A follow up study should be conducted to explore women's practices for pregnancy and delivery complications.

It is envisaged that the study results will be used by Maternal and Child Health programs to give evidence-based IEC and increase knowledge of danger signs in pregnancy among women so that they seek medical care urgently when they experience the danger signs. It is hoped that the findings will be useful to plan the care according to the needs of the communities in Choma rural district, and ultimately reduce maternal mortality.

Key words: Knowledge, Perceptions, Women, Danger signs in pregnancy.

TABLE OF CONTENTS

CONTENT	PAGE
Title page.....	i
Declaration.....	ii
Certificate of approval.....	iii
Dedication.....	iv
Acknowledgements.....	v
Abstract.....	vi
Table of contents.....	viii
List of tables.....	Xiii
List of figures.....	xv
Appendices.....	xi
Acronyms.....	xvi

CHAPTER ONE

1.0 Introduction.....	1
1.1 Background information.....	1
1.2 Statement of the problem.....	5
1.3 Factors influencing knowledge and perception of women towards danger signs in pregnancy.....	7
1.3.1 Socio-cultural economic factors.....	7
1.3.2 Service related factors.....	10
1.3.3 Pregnancy related factors.....	12
1.4 Justification for the study.....	14
1.5 Research question.....	15

1.6 Research objectives.....	15
1.7 Hypothesis.....	15
1.8 Operational definition of terms.....	15
1.9 Research variables and cut-off points.....	17

CHAPTER TWO

2.0 Literature review.....	18
2.1 Introduction.....	18
2.2 Global perspective	18
2.3 Regional perspective	23
2.4 Local perspective	26
2.5 Conclusion	26

CHAPTER THREE

3.0 Research methodology.....	28
3.1 Introduction.....	28
3.2 Research design.....	28
3.3 Research setting.....	28
3.4 Study population.....	29
3.4.1 Target population.....	30
3.4.2 Accessible population.....	30
3.5 Sample selection.....	30
3.5.1 Inclusion criteria	31
3.5.2 Exclusion criteria	31
3.6 Sample size.....	31
3.7 Data collection tools.....	32

3.7.1	Semi-structured Interview Schedule.....	32
3.7.2	Focus Group Guide.....	33
3.7.3	Validity.....	34
3.7.4	Reliability.....	35
3.8	Data collection techniques.....	36
3.8.1	Data collection technique for quantitative data.....	36
3.8.2	Data collection technique for qualitative data.....	37
3.9	Pretest.....	37
3.10	Ethical consideration.....	38

CHAPTER FOUR

4.0	Data analysis and presentation of findings.....	40
4.1	Introduction.....	40
4.2	Data processing and analysis.....	40
4.2.1	Data analysis.....	40
4.2.1.1	Quantitative data.....	41
4.2.1.2	Qualitative data.....	42
4.3	Data presentation.....	42
4.3.1	Quantitative data.....	42
4.3.2	Qualitative data.....	43
4.4	Focus Group Discussions.....	77
4.4.1	Demographic characteristics of participants.....	78
4.4.2	Knowledge about danger signs in pregnancy.....	78
4.4.3	Reception by health personnel.....	79
4.4.4	Traditional/Cultural beliefs about danger signs in pregnancy.....	80
4.4.5	Perception about danger signs in pregnancy.....	81
4.4.6	Suggestions for improvement.....	81

CHAPTER FIVE

5.0	Discussion of findings.....	82
5.1	Introduction.....	82

5.2 Demographic characteristics of respondents.....	82
5.3 Knowledge about danger signs in pregnancy.....	84
5.4 Service related information.....	85
5.5 Perception towards danger signs in pregnancy.....	87
5.6 Limitations of the study.....	91
5.7 Implications to nursing.....	92
5.7.1 Implications to nursing/midwifery practice.....	92
5.7.2 Implications to nursing administration.....	92
5.7.3 Implications to nursing education.....	92
5.7.4 Implications to nursing research.....	93
5.8 Conclusion and recommendations.....	93
5.8.1 Conclusion.....	93
5.8.2 Recommendations.....	95
5.9 Dissemination and utilization of findings.....	96
References.....	98

APPENDICES

Appendix I Participant information sheet.....	103
Appendix II Budget.....	109
Appendix III Gantt chart.....	112
Appendix IV Interview Schedule.....	113
Appendix V Focus Group Guide.....	129
Appendix VI Marking key	133
Appendix VII Letter from Research Ethics Committee.....	136
Appendix VIII Letter to District Director of Health.....	137
Appendix IX Letter from District Director of Health.....	138
Appendix X Letter to District Commissioner.....	139
Appendix XI Letter from District Commissioner.....	140
Appendix XII Map of catchment area for research.....	141

LIST OF TABLES

Table 1	Danger signs and possible causes.....	2
Table 2	Demographic data of respondents.....	44
Table 3	Definition of danger signs in pregnancy.....	46
Table 4	Source of the information about danger signs in pregnancy.....	47
Table 5	Importance of women knowing about danger signs in pregnancy.....	48
Table 6	Had experienced danger signs in pregnancy.....	49
Table 7	Action taken for danger signs experienced.....	50
Table 8	Type of information given.....	52
Table 9	Risk factors for developing pregnancy complications.....	52
Table 10	Given time to ask questions.....	60
Table 11	Reasons for using same health facility for ANC.....	61
Table 12	Causes of danger signs in pregnancy.....	62
Table 13	Danger signs can be prevented.....	62
Table 14	Mode of prevention of danger signs.....	63
Table 15	Action to be taken if a woman developed danger signs in pregnancy	63
Table 16	Cultural beliefs hindering seeking medical advice.....	65
Table 17	Overall knowledge about danger signs in pregnancy.....	66
Table 18	Overall perceptions towards danger signs in pregnancy.....	66
Table 19	Associations between demographic characteristics and knowledge about danger signs in pregnancy.....	67

Table 20 Associations between demographic characteristics and perceptions towards danger signs in pregnancy.....	69
Table 21 Associations between service related factors and knowledge about danger signs in pregnancy.....	71
Table 22 Associations between service - related factors and perceptions towards danger signs in pregnancy.....	73
Table 23 Associations between service - related factors and perceptions towards danger signs in pregnancy.....	75
Table 24 Associations between cultural beliefs and perception towards danger signs in pregnancy.....	76
Table 25 Associations between cultural beliefs and perception towards danger signs in pregnancy.....	76

LIST OF FIGURES

Figure 1 Conceptual framework on women's' knowledge and perception towards danger signs in pregnancy.....	13
Figure 2 Have heard about danger signs in pregnancy.....	46
Figure 3 Any pregnant woman can develop danger signs in pregnancy.....	47
Figure 4 Knowledge about danger signs in pregnancy.....	48
Figure 5 Reasons for knowing danger signs in pregnancy.....	49
Figure 6 Danger signs experienced.....	50
Figure 7 Given information about danger signs experienced by health workers	51
Figure 8 Time taken to reach health center.....	53
Figure 9 Means of transport used.....	54
Figure 10 Last pregnancy.....	55
Figure 11 Received ANC during their last pregnancy.....	56
Figure 12 Number of ANC visits made by the respondents.....	57
Figure 13 Time spent with the health worker.....	58
Figure 14 Were taught danger signs in pregnancy.....	59
Figure 15 Understood the topic.....	60
Figure 16 Would use the same health facility for ANC.....	61
Figure 17 Had any cultural beliefs hindering seeking medical care.....	64

ACRONYMS

ANC - Antenatal care

CBoH - Central Board of Health

CDHMT - Choma District Health Management Team

CGH - Choma General Hospital

CSO- Central Statistical Office

DHO - District Health office

FANC - Focused Antenatal care

FGD-Focus Group Discussion

GIDD - Gender in Development Division

GMT-Greenwich Meridian Time

IEC - Information, Education and Communication

MCH - Maternal and Child Health

MoH - Ministry of Health

SMAGS - Safe Motherhood Action Groups

SPSS - Statistical Package in Social Sciences

TBA - Traditional Birth Attendant

TDRG- Tropical Diseases Research Center

UNICEF-United Nations Children's Emergency Fund

UNZA - University of Zambia

WHO - World Health Organization

ZDHS-Zambia Demographic and Health Survey

ZMK- Zambian Kwacha

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

Pregnancy is usually an exciting time in the life of a family. It is a joyful event for most families as they anticipate bringing new life on earth. Although at times some of the common discomforts may make the pregnant woman feel ill, pregnancy is a normal physiologic process (Novak & Broom, 1999). Problems of pregnancy range from mildly irritating to life-threatening conditions (Fraser & Cooper, 2003).

Pregnancy is a time of great uncertainty and physical changes experienced by the woman during her pregnancy. She may need explanations and reassurance to help her cope with a wide variety of symptoms including nausea, heartburn, constipation, shortness of breath, dizziness, swelling, backache, abdominal discomforts and headaches. Mostly, these represent the physiological adaptation of the body to the pregnancy and are often called the 'minor complaints' of pregnancy. Although usually of minimal harm, these minor complaints of pregnancy can be extremely distressing and can cause significant anxiety. Occasionally, the minor complaints of pregnancy will be the first presentation of a more serious problem (Baker, 2006).

Sometimes, a pregnant woman may experience some signs and symptoms which signal danger. Danger signs in pregnancy are those signs that a pregnant woman will see or those symptoms that she will feel which indicate that something is going wrong with her or the pregnancy (Royston & Armstrong, 1989).

The danger signs in pregnancy include vaginal spotting or bleeding at any time, leaking of fluid from the vagina, unusual abdominal pain, cramping, pelvic pressure, or persistent backache, persistent nausea and vomiting, especially in the second and third trimester. The other danger signs in pregnancy are persistent headache or blurred vision, marked swelling of the ankles and especially of hands and face,

painful or burning urination, foul-smelling vaginal discharge, chills or fever, feeling very tired, and decreased fetal movements in the third trimester (Novak & Broom, 1999, MoH, 2005).

TABLE 1: DANGER SIGNS IN PREGNANCY AND POSSIBLE CAUSES

DANGER SIGN	POSSIBLE CAUSE
Vaginal bleeding	Threatening abortion, ante partum hemorrhage, cervical lesions
Leaking of fluid from the vagina	Premature rupture of membranes
Abdominal pain	Premature labor, abruptio placenta
Dizziness, blurring of vision, spots before the eyes	Hypertension, pre eclampsia
Fever or chills	Infection, malaria
Persistent vomiting	Hyperemesis gravidarum
Severe headache	Hypertension, pre eclampsia
Swelling of hands, face and legs	Pre eclampsia
Muscular irritability, fits	Eclampsia
Epigastric pain	Pre eclampsia, ischemia in major abdominal vessels
Pain on micturition	Urinary tract infection
Foul smelling vaginal discharge	Pelvic infection
Decreased/ absent fetal movements	Maternal medication, fetal death

Source: Davidson, Ladewig & London (2008).

The occurrence of any danger sign in pregnancy is a signal that something is wrong with the pregnant woman or the pregnancy itself. If this happens, the pregnant woman needs urgent medical care and advice. Knowledge of danger signs in pregnancy by pregnant women and their communities is the essential first step in accepting appropriate and timely referral to obstetric and newborn care (Pembe, Urassa, Carlstedt, Lindmark, Nystrom & Darj, 2009). Knowledge of danger signs in pregnancy ensures that the pregnant woman does not delay in seeking medical care. This would ultimately help reduce maternal mortality.

According to WHO (2005), Sub Saharan Africa had 270 000 maternal deaths, followed by Southern Asia with 188 000, together accounting for 86 % of the world's maternal deaths in 2005. WHO also estimates that the probability that a 15 year old girl will die from a complication of pregnancy and childbirth during her lifetime is highest in Africa, estimated at 1:26, compared to 1:7300 in the developed world. Niger has the highest estimated lifetime risk of 1:7 (WHO, 2005).

In an attempt to reduce maternal mortality, the Zambian government has strengthened antenatal services and has adopted the new WHO model for antenatal care, or the Focused Antenatal Care (FANC). FANC encourages women with normal pregnancies to attend antenatal care only 4 times during the 9 months of pregnancy (CBoH, 2002). This enables women to attend antenatal care with a clearly defined purpose and objective for each visit, and reduces the stress and cost of having the standard 'Western' model of antenatal care which recommended a minimum of 14 routine antenatal visits during a pregnancy (WHO, 2002). During antenatal care, women are given information on various topics about pregnancy, including danger signs of pregnancy, labor and care of the newborn (Anyia, Hydera & Jaiteh, 2008).

The antenatal education program or Information, Education and Communication (IEC) strategy was first articulated in the 1990s but has undergone revisions in line with emerging needs. The strategy is to inform and educate pregnant women on a variety of topics, among them, danger signs in pregnancy. Furthermore, antenatal care providers are expected to engage in dialogue with pregnant women to develop

appropriate and individualized delivery plans based on the concept of birth preparedness and complication readiness (Anya et al 2008). Giving pregnant women the knowledge they need would assist them to make informed choices if they experience any of the danger signs in pregnancy and seek care on time.

When mothers do not recognize the danger signs in pregnancy, adverse effects can occur to the mother, the unborn baby, or the pregnancy itself. Adverse effects include:

- Illness or death of the mother, for instance, severe bleeding can lead to anemia or death of the mother,
- Infection to the unborn baby through prematurely ruptured membranes, when amniotic fluid leaks from the vagina. If not attended to, this can lead to fetal or neonatal morbidity and mortality,
- Termination of a pregnancy before term in vaginal bleeding. Maternal hypertension or fever, can lead to increased numbers of neonatal deaths or prematurely born babies who may eventually die due to inadequate facilities to care for them.

A mother's death in childbirth denies her children their natural, primary care giver and significantly increases the risk that her infant will die or fail to survive to age 5. A mother's death also has an extremely detrimental effect on her children's access to education and health care. Many children who survive without mothers also risk being emotionally lost (UNICEF, 2009).

The death of a mother results in a burdened society as the role of a woman is usually irreplaceable. Women are usually the sole home managers, ensuring household food security, providing meals for the family, and taking care of the sick, especially in African society. The death of a woman results in household food insecurity, suffering of the children and the whole household.

The other efforts made by the Zambian government to reduce maternal mortality include adopting the Safe Motherhood Initiative in 1987 which aimed at improving the health of women, integrating Maternal and Child Health programs in all health institutions, and adopting the Integrated Reproductive Health Plan of Action in 2003-

2005, which used a number of strategies to improve maternal and neonatal health, some of which are;-

- Antenatal care with emphasis on IEC on danger signs in pregnancy
- Safe and clean delivery
- Management of obstetric emergencies
- Post natal care and family planning
- Community participation
- Teaching of danger signs in pregnancy is also included in the Zambia midwifery curriculum to equip midwives with the information to teach mothers about the danger signs.

In 2007, the Ministry of Health and its partners introduced Safe Motherhood Action Groups (SMAGs) in 24 districts. In 2008, 9 more districts were included in the program, with the view of including all the 72 districts in 2009. One of the objectives of the SMAGs is to sensitize communities/households on early recognition of danger signs in pregnancy (MoH, 2009).

To a certain extent, the above mentioned efforts have yielded a positive outcome as the maternal mortality ratio has dropped from 729/100000 live births in 2002 to 591/100000 live births in 2007 (CSO, 2007). However, a lot still needs to be done to reduce the maternal deaths, for instance if women knew the danger signs in pregnancy, they would seek medical care early.

1.2 STATEMENT OF THE PROBLEM

The World Health Report of 2005 by Lerberghe estimates that half a million women die in pregnancy, childbirth or soon after delivery. Of these deaths, 86% occur in developing countries (Lerberghe, 2005). The same report states that a woman dies every minute from pregnancy and delivery related causes somewhere in the world. This affects all women of childbearing age.

New maternal mortality estimates show that while gains are being made in middle income countries, annual decline between 1990 and 2005 in Sub Saharan Africa is only

0.1 % (WHO, 2005). In 2005, 536 000 women died of maternal causes compared to 576 000 in 1990 and 99% of these deaths occurred in developing countries (WHO, 2005).

It is against this background that countries have adopted strategies to try and reduce maternal mortality. One of these strategies is IEC on the danger signs in pregnancy in order to increase women's awareness and enable them to seek care when they experience any of the danger signs. Health services can only help when women are able to make use of them, and recognizing danger signs is critical in seeking care quickly.

Despite the IEC strategy on danger signs in pregnancy, very few women have knowledge about them. A study carried out in the Gambia revealed that only few women had knowledge on danger signs in pregnancy. About 28.9% of the respondents recognized anemia, 24.6% recognized hypertension, 14.8% recognized hemorrhage, and 12.9% recognized fever as danger signs in pregnancy, and these low levels of awareness contribute to continuing high levels of maternal mortality in the country (Anya et al 2008).

Knowledge of danger signs in pregnancy by pregnant women and their communities is the essential first step in accepting appropriate and timely referral to obstetric and newborn care (Pembe et al, 2009).

Zambia has an estimated population of 11.3 million people, and of these, 50% are women (Ministry of Health, 2005). It is estimated that four thousand women die annually during pregnancy and childbirth (CBoH, 2002). Some of the major causes of maternal mortality are hemorrhage, hypertensive disorders of pregnancy, sepsis and thrombo-embolic disorders (CBoH, 2002).

Choma district is one of the districts in the Southern Province of Zambia, with a total population of 247 606, and of these, 54 473 are women in the child bearing age (Choma District Health Management Team, 2006). The district has an ANC coverage of 91% (Choma District Health Management Team, 2006), and teaches danger signs in pregnancy, but health facility maternal deaths are estimated to be 128/100000 live births (Choma District Health Management Team 2006), which is high. Mkandawire in

2004 stated that maternal deaths that occur in the community are even more than health facility deaths (Choma DHMT, 2006). According to Southern Province 2000-2005 HMIS report, Choma district has been ranking 2nd or 3rd in maternal deaths out of the 11 districts in the Province.

With this high figure of maternal mortality, a solution has to be found and the causes of the mortalities sought. The investigator would therefore want to find out how much women know about danger signs in pregnancy, and their perception, in an attempt to find out whether lack of knowledge and negative perception towards danger signs in pregnancy could be contributing to the maternal mortalities in the district. This will help in planning strategies to meet the needs of the communities in Choma concerning danger signs in pregnancy.

1.3 FACTORS INFLUENCING KNOWLEDGE AND PERCEPTION OF WOMEN TOWARDS DANGER SIGNS IN PREGNANCY

Knowledge of danger signs in pregnancy is an important factor in reducing maternal ill-health and death. The goal of teaching of danger signs in pregnancy is to increase awareness about danger signs among women and what action to take under the circumstances (Royston & Armstrong, 1989). Women and their families can only take action when problems arise during pregnancy if they are informed and recognize the signs of danger. Thus the teaching of danger signs in pregnancy is very important.

The factors that influence knowledge and perception of women towards danger signs in pregnancy can be classified into three broad categories: socio-cultural economic factors, service related factors and pregnancy related factors.

1.3.1 SOCIO - CULTURAL ECONOMIC FACTORS

1.3.1.1 Poverty

The social economic decline that Zambia has been experiencing from the mid 1970s has eroded the standard of living of people (GIDD, 2000). Though poverty affects both men and women, women are more affected, partly because they are less educated, and

have poor access to and control of the means of productive resources and earnings (GIDD, 2002). Due to increased poverty levels, people are unable to acquire electronic media equipment, like radios and television which can expose them to information. Information, Education, and Communication on health matters is given in Zambia on the media, and if people had access to the media, they would get the information.

A study in Nepal on awareness of danger signs in pregnancy by married women recommended teaching of danger signs by educating people on radio (Mahato et al, 2008.). This can only be possible if people can afford to buy the radios and maintain them.

1.3.1.2 Education

The education level of a woman affects her uptake and perception about danger signs in pregnancy. Limited access to education translates into poor understanding of basic health care concepts, including danger signs in pregnancy (Feldman-Jacobs, Olukoya & Avni, 2005). In Zambia, illiteracy levels are at about 44% and 2/3 of the illiterate people are women (GIDD, 2000). Inability to read and write reduces one's chances of reading IEC materials and places them at a disadvantage. Even assimilation and understanding of the IEC, is to a large extent, affected by one's ability to read and write.

A study conducted in Tanzania on women's awareness of danger signs of obstetric complications revealed that having secondary education or higher increases knowledge about danger signs in pregnancy (Anyu et al 2008).

1.3.1.3 Occupation

Women who are engaged in some form of employment outside the home are exposed to different kinds of information through socialization and mingling with others. A woman who just stays at home is not exposed much to information from outside sources, especially if they do not own any electronic media, like radios.

Women who have not played a role outside the home may also be very uncomfortable in the public sphere, including clinic and hospital settings, where they may be unable to

ask questions or express their concerns to health care providers (Feldman-Jacobs et al, 2005).

The study conducted in Nepal also revealed that 66.7% of women who were employed had higher levels of knowledge about danger signs in pregnancy (Mahato et al, 2008).

1.3.1.4 Age

With advancing age, people tend to accumulate a lot of knowledge through socialization and own experiences. A lot of things happen in society and people are able to learn various lessons by what happens to them or others within society. A younger person may not have a lot of experience, but an older person will have a lot of experience by observing society.

An older woman will have more knowledge on danger signs in pregnancy through her own, or other's experiences. Perception, on the other hand, may be negative because older women have traditional beliefs and may interpret danger signs in a traditional way.

A younger woman may not have enough information from experience, but may be educated and may have had IEC on danger signs in pregnancy. This will make her better able to understand danger signs in pregnancy and perceive them as urgent issues that need urgent medical attention.

1.3.1.5 Traditional/cultural beliefs

In many Zambian communities, some cultural practices and norms often place women at a disadvantage and pose great risk to their health (GIDD, 2000). Girls are socialized to become wives and mothers who are generally submissive and have low opinion of themselves. Also, traditionally, women are supposed to be strong, especially in pregnancy and childbirth. Pain and illness should be borne quietly, and laziness on the part of a woman is not accepted.

A woman who has been brought up thinking like this may not know which is a danger sign of pregnancy, and may perceive it as something that should be borne quietly. When a danger sign in pregnancy, occurs, like prolonged labor, traditional

interpretations may be made as to the cause of the problem, like marital unfaithfulness by the husband, leading to seeking traditional remedies, and therefore may not be perceived as something needing urgent medical attention.

1.3.2 SERVICE RELATED FACTORS

1.3.2.1 Distance to health facility

The vision of the Ministry of Health is 'equity of access to quality, cost-effective and affordable health services as close to the family as possible' (MoH, 2005). Sometimes equity of access is challenged by long distances to health facilities and women can not walk the long distances to access care. Even when transport for hire is available, families may not afford it due to poverty. Women fail to attend antenatal clinics, where they are taught about danger signs in pregnancy and therefore will have no knowledge about them.

1.3.2.2 Quality of services

Availability of appropriate human resource at all levels of health care is a critical factor in ensuring the delivery of efficient and effective essential health services to all. Sub Saharan Africa has 25% of the global burden of disease, but only 3% of the health workers (Mera Medical Resource Africa, 2008).

Currently, the health sector in Zambia is experiencing a human resource crisis, which is significantly undermining its capacity to provide even the basic health care services to people. The current health sector human resource capacity is estimated at about 50 % of the recommended establishment (MoH, 2005). With such acute staff shortage and increased pressure and workload on staff, IEC may not be adequately given and women may not be accorded ample time to be with health care providers or to ask for clarifications.

The Focused Antenatal Care (FANC) recommends that women should spend 40 minutes with a health care provider during the booking visit for IEC, counseling and investigations, and 20 minutes at each of the subsequent visits. This would enable them to be taught and counseled on danger signs in pregnancy. But women only spend 3

minutes on average with a health care provider (Anya et al, 2008). Therefore they are not given enough information and they lack knowledge on danger signs in pregnancy.

1.3.2.3 Reception by health workers

Sometimes, attitude of health workers scare women away from seeking health care. Health workers and especially nurses and midwives are always accused of being rude and inapproachable and mothers shun health services and antenatal care. This makes them less knowledgeable about danger signs in pregnancy. Good reception by health workers, on the other hand, encourages women to seek care and interact freely with their health care providers.

A study done in Uganda on why women shun hospitals revealed that women shunned hospitals because nurses were rude and humiliated women who went to hospital for reproductive health issues. Women who were circumcised reported that nurses chased them away when they tried to seek care (Lirri, 2008). Women felt safer and dignified when attended to by Traditional Birth Attendants (TBAs) than by health care workers. In the same study a nurse who was interviewed confirmed that turnout for maternity services was low.

1.3.2.4 IEC and counseling about danger signs in pregnancy

When women are given IEC and receive counseling about danger signs in pregnancy, they will be better able to know and understand them and this can make them perceive danger signs that occur as something for which they urgently need to seek medical care. Lack of IEC may make women not to know or understand the danger signs of pregnancy.

A study on women's knowledge about danger signs in pregnancy conducted in rural Tanzania revealed that women who were informed of having a danger sign during antenatal care have higher levels of knowledge about the same (Pembe et al, 2009).

1.3.3 PREGNANCY RELATED FACTORS

1.3.3.1 Parity

Parity may affect the way a woman knows and perceives danger signs in pregnancy. A multiparous woman may have higher levels of knowledge about danger signs if they experienced one during the previous pregnancy(s), or through receiving IEC during previous pregnancy(s). A primigravid woman on the other hand, may have lower levels of knowledge and may not understand the implications in the absence of IEC (Anya et al, 2008).

1.3.3.2 Number of antenatal visits

During a pregnancy, a woman who has attended at least more than one antenatal visit may have some knowledge about danger signs in pregnancy and understands what needs to be done in the event of having danger signs as a result of exposure to IEC during antenatal care (Anya et al, 2008).

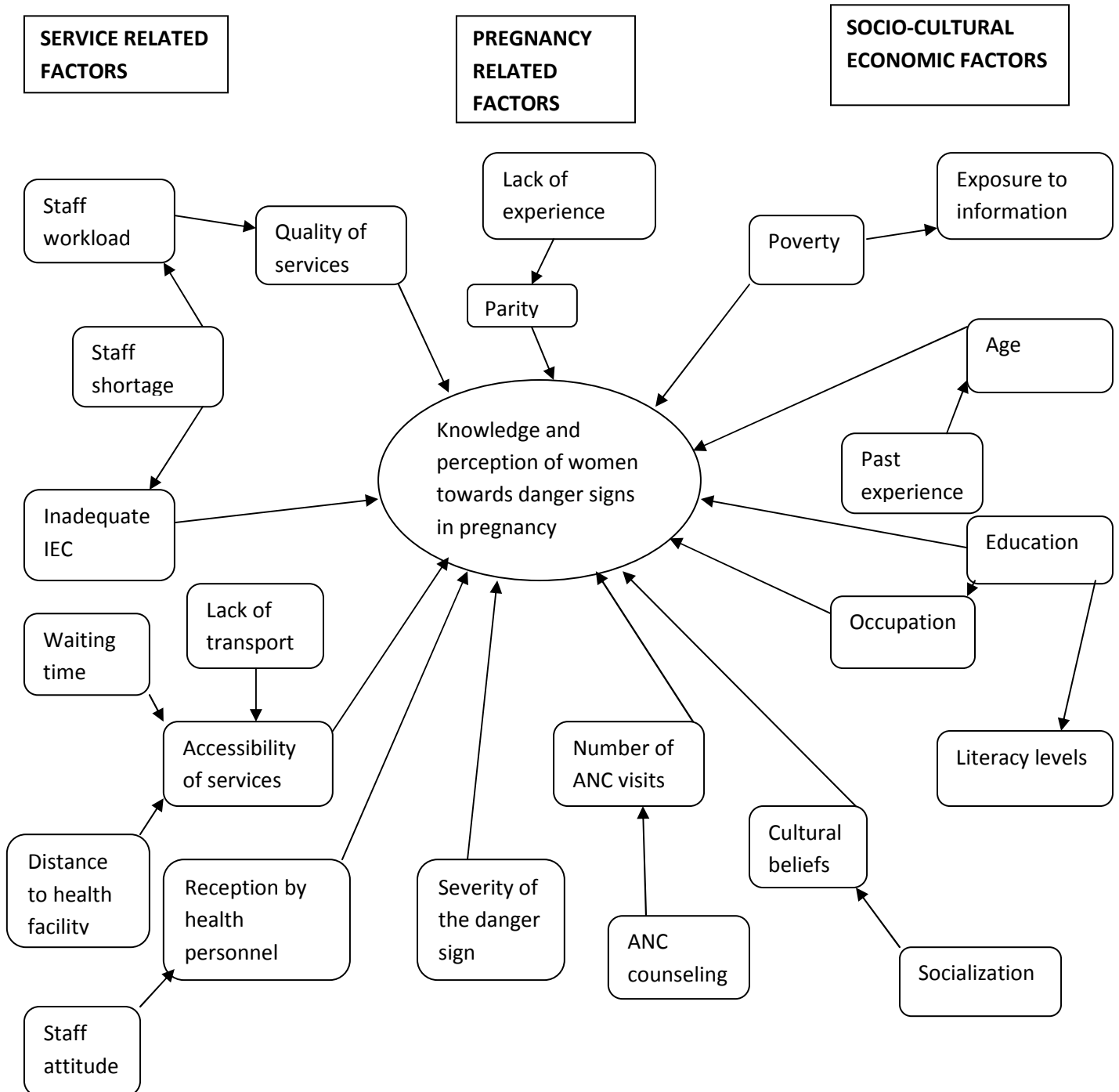
A woman who has never attended antenatal care may have lower levels of knowledge because they will not have been taught about them.

1.3.3.3 Severity/ type of the danger sign

Some danger signs may be regarded as insignificant by women, and therefore may not be regarded as something serious, for instance, bleeding in early pregnancy may be regarded as something minor as the pregnancy is trying to settle. But a woman who has a massive bleed, for example, during third trimester may quickly sense that this is not normal but that she needs to seek care.

CONCEPTUAL FRAMEWORK ON WOMEN'S KNOWLEDGE AND PERCEPTION TOWARDS DANGER SIGNS IN PREGNANCY

Figure1. Factors influencing knowledge and perception of women about danger signs of pregnancy



1.4 JUSTIFICATION FOR THE STUDY

Africa remains one of the regions with the highest maternal mortality ratios, with a maternal mortality ratio ranging from as high as 578-900/100000 live births in some countries (Pembe et al, 2009), including Zambia. Knowledge and perception of danger signs in pregnancy remains low, which may be an important factor in reducing maternal mortality as women will recognize the danger signs and seek medical care on time.

Factors that influence knowledge and perception of women towards danger signs in pregnancy in Choma Rural District are not yet known.

The investigator wishes to conduct this study among women in Choma Rural District to find out their knowledge and perception towards danger signs in pregnancy.

It is hoped that the information generated from this study will be used by Maternal and Child Health (MCH) programs to give evidence-based IEC to women in Choma District and increase knowledge about danger signs in pregnancy among women and communities and thus help them to seek medical care urgently when they experience the danger signs. This will hopefully help to reduce the maternal mortality in the district.

It is also hoped that this study will bring out the perceptions of women towards danger signs in pregnancy and will therefore assist in planning evidence-based programs for the women and their communities and help reduce any negative perceptions which may hinder women and their communities from seeking care when they experience danger signs in pregnancy.

The study will be beneficial to the community where it will be conducted as the respondents will be given information and have their questions concerning danger signs in pregnancy, answered. Study results will assist health care providers to plan the care according to the needs of the communities and render evidence based care and education concerning danger signs in pregnancy.

1.5 RESEARCH QUESTION

Could lack of knowledge and negative perception towards danger signs in pregnancy be contributing to maternal mortality in Choma District?

1.6 RESEARCH OBJECTIVES

1.6.1 General Objective

- To determine women's knowledge and perception about danger signs in pregnancy in order to find possible solutions.

1.6.2 Specific Objectives

- To assess level of knowledge about danger signs in pregnancy among women.
- To determine women's perception about danger signs in pregnancy.
- To identify factors that affect knowledge of women towards danger signs in pregnancy.
- To identify factors that affect women's perception about danger signs in pregnancy.
- To assess the association between women's demographic background and knowledge of danger signs in pregnancy.

1.7 HYPOTHESES

1.7.1 Null hypothesis

There is no association between knowledge and perception towards danger signs in pregnancy and the following factors; level of education, cultural beliefs, quality of services, number of antenatal visits and parity.

1.8 OPERATIONAL DEFINITION OF TERMS

Pregnancy: this refers to the condition of being with child or the condition from conception to the expulsion of the fetus.

Danger signs in pregnancy: this is an indication that the pregnant woman or/and the pregnancy has an ailment, manifested by such signs like bleeding, leaking of fluid from the birth canal, fever, persistent vomiting, severe headache, swelling of the body and other abnormal signs.

Parity: this refers to number of children one has borne.

Multipara: this is a woman who has given birth more than once.

Primigravida: this is a woman who is pregnant for the first time.

Knowledge: this is acquaintance with facts, truths or principles about danger signs in pregnancy.

Perception: this means an idea, a belief or an image one has as a result of how they see or understand the danger signs in pregnancy.

Antenatal care: this is care rendered to a pregnant woman from conception up to the time she goes into labor.

Focused Ante Natal Care: this is the new WHO antenatal model that requires women with normal pregnancy to attend antenatal care only four times during the entire pregnancy.

Maternal death: this refers to death of a woman from pregnancy and child birth related causes, or death of a woman while pregnant or within 42 days of termination of pregnancy.

Culture: the whole complex of distinctive, spiritual, material, intellectual and emotional attributes that characterize a society or social group.

Cultural practice: this refers to functional roles and rituals, which are culturally determined.

Women: this refers to adult female human beings who are in the child-bearing age.

Child-bearing age: the ages from 15 to 49 years when a woman is in her reproductive period.

Younger woman: this is a woman in the age group 15-30 years of age

Older woman: this is a woman in the age group 31-49 years.

1.9 RESEARCH VARIABLES AND CUT- OFF POINTS

Variables	Cut off points	Indicators
Independent variables		
Level of education	High	College or university education
	Medium	Secondary education
	Low	Primary or no education
Cultural beliefs	Positive	Cultural beliefs that encourage seeking medical care for danger signs in pregnancy
	negative	Cultural beliefs that discourage seeking medical care for danger signs in pregnancy
Number of antenatal visits	Very good	4 times in normal pregnancy
	Average	2-3 times in normal pregnancy
	Below average	0-1 in normal pregnancy
Quality of services	Good	Scores of 9-16 on service related information
	poor	Scores of 1-8 on service related information
Parity	High	5 children and above
	Low	4 children and below
Dependent variables		
Knowledge of danger signs in pregnancy	high	Scores of 8-11 on knowledge questions
	medium	Scores of 4-7 on knowledge questions
	Low	Scores of 0-3 on knowledge questions
Perception of danger signs in pregnancy	Positive	Scores of 6-9 on perception questions
	negative	Scores of 1-5 on perception questions

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, the literature reviewed for this study is discussed.

Literature review is an organized written presentation of what has been written and published about a topic by other scholars and includes a presentation of research conducted in the selected field of study (Burns & Grove, 2009). Literature review refers to activities involved in identifying and searching for information on a topic and developing an understanding of the state of knowledge on that topic (Polit & Hungler, 1999).

The general purpose of a literature review is to convey to the reader what is currently known regarding the topic of interest (Burns & Grove, 2009). It helps the researcher to generate ideas or focus on a research topic and helps bring the problem into sharper focus and aids in formulation of appropriate research questions (Polit & Hungler, 1999). Literature review also provides the foundation on which to base new knowledge (Polit, Baker & Hungler, 2001).

For this study, the focus of the literature review is on knowledge and perception of women about danger signs in pregnancy. However most of the studies reviewed were on women's awareness of obstetric complications in general and not on danger signs of pregnancy only. The literature is organized into three categories, that is, global, regional and local perspectives.

2.2 GLOBAL PERSPECTIVE

Essentially, all women are at risk of getting complications during pregnancy, but they cannot seek emergency obstetric services unless they know the danger signs in pregnancy. In Bangladesh, a cross-sectional study was conducted to assess rural Bangladeshi women's knowledge and care-seeking behavior regarding obstetric complications (that is, complications of pregnancy, delivery and the post partum period).

Results showed that more than 80% of women in Abhoynagar and over half of the women in Mirsarai were able to mention three or more types of pregnancy and/or childbirth related complications. Despite their high knowledge levels about pregnancy/childbirth related complications, the women still sought care from traditional providers for deliveries and for management of obstetric complications.

It was also reported that 59% of the women in Abhoynagar and 49% in Mirsarai who reported to have experienced pregnancy-related complications consulted trained providers. In both areas, women were less likely to consult trained providers for delivery related complications than for pregnancy related complications (Khanum, Quaiyum, Islam & Ahmed, 2000).

From this study, it can be seen that some women may not understand the seriousness of the danger signs in pregnancy and therefore can not seek medical care on time (Khanum et al, 2000). Those who can name the danger signs may have negative perception about them and seek care from traditional providers, hence there is need to teach women about danger signs so that they understand them and make informed choices if they experience them.

The study further found that most mothers did not receive antenatal care. Only 29 % of women who gave birth in the 5 years prior to the study attended at least one antenatal visit and only 19 % had two or more antenatal checkups. This means that women lost out on the IEC that is given at antenatal clinics. Emergency Obstetric Services were also found to be under utilized by women. This may mean that women had negative perception about danger signs in pregnancy and therefore did not seek medical care when danger signs occurred. In order to encourage women to utilize Emergency Obstetric Services, they should be taught danger signs in pregnancy so that they understand them and can have positive perception about these danger signs.

A similar study conducted in Eastern Europe and Central Asia by the Netherlands School of Public Health in 2007 on knowledge, attitudes and practices of people of reproductive age as well as service providers in the area of pregnancy, delivery and the post partum period revealed that women had no basic knowledge in reproductive health

issues. For instance, they could not discriminate between physiological and pathological changes, or recognize danger signs during pregnancy. The study also revealed that the health care services were of poor quality, there were no counseling services and trustful relationships between health care providers and clients (<http://www.nspoh.nl/page.ocl?>). This entails that women will not recognize danger signs in pregnancy even if they experienced them and will therefore not seek care. The poor quality of health care may also discourage women from seeking medical care.

Safe motherhood programs can effectively increase knowledge of danger signs in pregnancy through clinic-based and community-based education. This came to light in a study conducted from 1997 to 1999 by Perreira and others, in Guatemala to evaluate effectiveness of IEC strategies designed to increase awareness of danger signs in pregnancy, delivery and the post partum period among pregnant or recently pregnant women. Three IEC programs were implemented in 4 regions of South-western Guatemala. It was found that among women using the clinics, the likelihood of having heard of danger signs nearly tripled where clinic interventions were fully implemented. Those who had heard radio messages or participated in women groups were 3 to 5 times more likely to have heard of danger signs of obstetric complications (Perreira, Bailey, de Bocalette, Hurtado, deVillagrans & Matute, 2004).

This study conducted in Guatemala shows the important role that IEC plays in informing women of danger signs in pregnancy. Such knowledge and understanding would help women recognize danger signs of pregnancy and have positive perception about them and seek care on time.

An intervention study was conducted by Vernon, Lopez, Carcamo & Galindo in 1993 in the Honduras on women attending antenatal care. It involved teaching the women various safe motherhood topics followed by giving them brochures, and video shows were done on the topics taught. Data on knowledge of topics taught was obtained in post partum surveys. Results showed that impact was achieved with significant increase in knowledge of warning signs during pregnancy ($p < 0.001$). For example, knowledge that contraction before the 9th month of pregnancy is not normal increased from 25% to

41% (Vernon et al, 1993). Therefore, teaching mothers about pregnancy danger signs can increase their knowledge about these signs.

A study conducted in Pakistan by Hasan in 2001 on women's knowledge regarding obstetric complications and care in a fishing community in Karachi, in a cross-sectional study involving 329 married women of reproductive age, indicated poor knowledge of common and serious pregnancy related complications. Knowledge of danger signs ranged from 3-39% for the different danger signs of pregnancy. The study further indicated that women's perception regarding obstetric care suggested the prevalence of unsafe practices. The findings showed that 86% of women thought that a case of ante partum hemorrhage has to be examined internally by a vaginal examination to find the cause for the bleeding, but this is contra indicated in obstetrics as it can induce more bleeding. This study clearly shows that women lack knowledge about danger signs in pregnancy and have negative perception about them due to lack of knowledge. If such women developed the danger signs, they would be less likely to seek medical care as they could not recognize the danger signs.

In Nepal, pregnancy related complications lead to over 4 500 maternal mortalities among married women annually, with a maternal mortality ratio of 539/100 000 live births (Mahato et al, 2008). One of the major causes of the high maternal mortality ratio is lack of awareness on management of reproductive crises, that is, danger signs in pregnancy and seeking care. This was revealed in a study carried out in 2 districts of Nepal on awareness level of 5 danger signs in pregnancy among married women, with a sample size of 301 women.

Results showed that 60.7% of women had low levels of awareness on 5 danger signs of pregnancy. Of these, 43.5% had received the information from family members while 56.2% had been informed by electronic media. Of the 301 respondents, 76.7% had received counseling about danger signs of pregnancy, 35.1% had correct knowledge and visited ANC 4 times or more. Among those who had frequent ANC checkups, 85.4% had knowledge about danger signs of pregnancy. There was also significant association between education status and level of awareness of danger signs ($p=0.000$, $df=1$).

From this study, the role of ANC in informing women about danger signs in pregnancy is evident. The study also indicated the importance of counseling women, who have experienced danger signs in pregnancy in order to raise awareness. Raising women's socio-economic status by educating and providing employment opportunities for them would help them have higher knowledge levels and have positive perception about danger signs too.

In 1993, Thapa carried out a study in Nepal on knowledge and attitude of mothers-in-law regarding the intra conception care of their daughters-in-law. The objective of the study was to determine whether education sessions for mothers-in-law change their knowledge attitude and practices. Three day education sessions on care of pregnant women, danger signs in pregnancy and high risk pregnancy, and danger signs during labor, on the neonate and on the postpartum mother were given to the mothers-in-law. The results showed that 35.4% of mothers-in-law recognized the importance of ANC at pretest and 100% at one year posttest. At pretest, 61.6% of mothers-in-law did not know any danger sign of pregnancy and 39.4% did not know any risk factors. At one year posttest, 99% of respondents knew more than two danger signs in pregnancy while 100% knew more than two risk factors. These findings also clearly show the importance of teaching communities about danger signs in pregnancy and especially mothers-in-law as they play an important role in deciding what type of care their daughters-in-law will receive when a pregnancy danger sign occurs.

The perception of one danger sign (bleeding) was also explored in the Nepalese district of Kavrepalananchowk, by Matsuyama and Moji, in 2008. The purpose was to explore the local understanding of bleeding during pregnancy and at delivery, and the meaning attached to it. Findings indicated that the community's perceptions and meaning attached to bleeding varied depending on the actors in the family (Matsuyama & Moji, 2008).

This study also shows the importance of teaching community members the danger signs in pregnancy so that they understand them and the serious health risk they pose to the pregnant woman and the unborn baby, and enable them to seek medical care on time if they experience the danger signs.

Another study conducted in three Mexican states examined factors associated with maternal mortality and 164 households where a maternal death had occurred were selected from all deaths that occurred in 1995 of women aged 12-49 years. It was found that women died mostly due to delays in seeking care. One of the causes of delay, among others, was that women underestimated the danger sign observed. Other causes included lacking efficient transport to health centers, lack of money and cultural reasons (Castro, Campero, Hernandez & Langer, 2000).

This study also shows that there is need to teach and explain danger signs of pregnancy to women so that they understand the gravity of these danger signs and seek medical care if they occur.

2.3 REGIONAL PERSPECTIVE

According to WHO (2005), Sub Saharan Africa has one of the highest maternal mortality ratios in the world and much of this is attributed to failure to recognize danger signs in pregnancy, leading to delay in seeking care (Pembe et al, 2009). Knowledge of the danger signs in pregnancy is low among most women in Sub Saharan Africa, and therefore perception towards the same may be negative.

A research carried out in the Gambia by Anya et al, in 2008, entitled 'ANC in the Gambia: missed opportunity for IEC' examined the provision of IEC in antenatal clinics from the perspective of pregnant women attending the clinics. It was found that 90% of the women attended ANC more than once and 52% attended 4 times or more, providing a wonderful opportunity for IEC. Most of the women said they spent 3 minutes or less with the ANC providers. Approximately 19.3% of women said they were informed on what to do if there was a complication of pregnancy. Awareness of danger signs in pregnancy was low, with 28.9% of women recognizing anemia, 24.6% recognizing hypertension, 14.8% recognizing hemorrhage, and 12.9% recognizing fever as danger signs of pregnancy. It was also found that women with 4 or more pregnancies recognized danger signs more (30.8%), than women with fewer pregnancies (10.3%). The study concluded that IEC during ANC was poor and pregnant women are ill-

equipped to make appropriate choices especially when they are in danger (Anya et al, 2008).

This study shows the importance of good quality of care and spending enough time with antenatal women, in teaching them about danger signs in pregnancy, and therefore helping them to have positive perception about them. Most of the women attend antenatal care and so the opportunity to teach them is available. Parity also plays an important part in recognizing danger signs in pregnancy as women can recall from their past experiences what can be termed as a danger sign of pregnancy.

Another study was carried out in rural Tanzania by Pembe and others, in 2009, on awareness of obstetric complications on 1118 women who had been pregnant in the past 2 years. The study revealed that 98% of the women attended antenatal care at least once. Half of the women knew at least one obstetric danger sign. Twenty-six (26%) knew at least one danger sign in pregnancy. Women with secondary education or more were 6 times more likely to know the danger signs of obstetric complications compared to women with no education. The likelihood to know also increased by the age of the mother, number of deliveries, number of antenatal visits, and whether the mother was informed of having a complication during antenatal care (Pembe et al, 2009).

It can be noted again from this study that most women attend antenatal care, providing an opportunity to teach them about danger signs in pregnancy. Level of education, age and parity of the mother, and counseling them about danger signs in pregnancy are also important factors in raising knowledge levels of women about danger signs of pregnancy. This would help them know what to do if they experience any danger sign.

A study was conducted in Southern Tanzania by Mpembeni, Killewo, Leshabari, Massawe, Mushi & Mwakipa in 2007 to assess the use of skilled care at delivery and it revealed that 46.7% of women delivered in a health facility. The proportion of women with skilled care at delivery increased with knowledge of danger signs from 39% among women who did not mention any danger signs to 68% among those who mentioned 4 or

more danger signs. It was also found that none of the women had high levels of knowledge about danger signs in pregnancy.

This study reveals that few women know the danger signs in pregnancy and therefore, there is need to raise awareness among women.

Household surveys were conducted from the year 2000, by Forstenzer, on 'patterns of seeking skilled care at delivery', over a 5 year period in Burkina Faso, Kenya, and Tanzania. The main objective was to enable the Skilled Care Initiative to measure objectively the impact of a set of interventions on rates of delivery with a skilled attendant and also to give opportunity to assess community members' knowledge and attitude regarding important life-saving behaviors like problem recognition. Results showed that in Kenya, 9 out of 10 women were able to name at least one danger sign of pregnancy and childbirth, in Burkina Faso 6 out of 10 women and in Tanzania, 5 out of 10 women could name at least one danger sign in pregnancy and childbirth. Among the women who named at least one danger sign, 42% in Burkina Faso, 48% in Tanzania, and 88% in Kenya believed that such problems can be fatal (Forstenzer, 2006).

This study also shows that knowledge of danger signs in pregnancy among women is minimal and their perception is negative because they do not understand the seriousness of the occurrence of a danger sign in pregnancy.

Traditional and spiritual concepts surround pregnancy and childbirth (Dosterbaan & da Costa, 1995). A study to examine the range of traditional and spiritual concepts that surround pregnancy conducted in Guinea Bissau by Dosterbaan and da Costa in 1995 revealed that knowledge of danger signs in pregnancy among women was virtually absent. When women became ill they tended to consult competing sectors of traditional and modern medicine but no referral existed between them.

Again, the importance of teaching women about pregnancy danger signs is evident from this study.

2.4 LOCAL PERSPECTIVE

In Zambia, the teaching of danger signs in pregnancy has been re emphasized since around 2001. Midwifery training institutions included the teaching of danger signs in pregnancy to student midwives to impart them with knowledge so that they could teach women about danger signs in pregnancy. When mothers recognize the danger signs of pregnancy, they are able to seek medical care early.

A study carried out in 1996 by Kanyama, Mumba & Rietsman on maternal mortality in Kaputa found a maternal mortality exceeding 1500/100000 live births and very few of the deceased sought medical care. Mostly, they died of bleeding, obstructed labor and traditional causes. This could imply that the women and their families did not recognize the danger signs of pregnancy, or they had negative perceptions about them, and therefore did not seek care.

Similar findings were reported from the Western Province of Zambia (Ahmed, 1996). These studies indicate that women lack knowledge about danger signs in pregnancy and need to be sensitized about them. This is in spite of the IEC strategy about danger signs in pregnancy.

Very few studies have so far been done on knowledge and perception of women towards danger signs in pregnancy in Zambia.

2.5 CONCLUSION

Studies conducted globally and regionally on the study subject indicate that women's knowledge about danger signs in pregnancy is quite low, and that most countries have realized the importance of the teaching of danger signs in pregnancy to equip women to make informed choices when they are faced with the danger signs in pregnancy. However, very few studies have so far been done on knowledge and perception of danger signs in pregnancy by women in Zambia.

The literature reviewed mostly consists of studies conducted to assess women's knowledge about danger signs of obstetric complications in general and did not explore the perception of women about danger signs in pregnancy. Mostly, the target groups for

the studies consisted of women who had given birth within two years or less, of the study and left out most of the older women who could influence the younger women experiencing pregnancy danger signs. The local perspective is also missing.

The researcher therefore wishes to conduct a study focusing on women's knowledge and perception about danger signs in pregnancy in Choma Rural District at one rural health center. This will be helpful in giving evidence based IEC to women according to the study findings. The study will be conducted with the view of improving antenatal services and IEC, and ultimately reducing maternal mortality in the district.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this chapter, the methodology that was used for the study is discussed. Methodology refers to a set of methods and principles used to perform a particular activity, or 'the way that pertinent information will be gathered to answer the research question or describe the phenomena related to the research problem' (Dempsey & Dempsey, 2000). Research methodology is the entire strategy for the study, from identification of the problem to final plans for data collection (Burns & Grove, 1999).

3.2 RESEARCH DESIGN

Polit and Hungler (1999) state that research design is the overall plan for addressing a research question including the specifications for enhancing the integrity of the study. This study used a mixed method cross-sectional, descriptive design that employed both the qualitative and quantitative approach. Descriptive study designs are useful in gaining information about characteristics within a particular field of study to provide a picture of situations as they naturally happen (Burns & Grove, 2009). Cross-sectional designs examine groups of subjects in various stages of development, trends, patterns and changes simultaneously with the intent to describe changes in the phenomena across stages (Burns & Grove, 2009). Data were collected at one point in time.

This study described knowledge and perception of women about danger signs in pregnancy. It was cross-sectional as data was collected at one point in time in order to determine women's knowledge and perception towards danger signs in pregnancy. This research design was chosen because not much has been done on the topic. The study also examined the association between different variables.

3.3 RESEARCH SETTING

Research setting is the physical location and conditions in which data collection takes place (Polit & Hungler, 1999).

This study was conducted in Choma Rural District in the Southern Province of Zambia, 289 km south of Lusaka. Choma District has two hospitals, one in the urban and the other in the rural district and there are thirty six health centers, six in Choma Urban and thirty in Choma Rural District (Choma DHMT, 2009).

The study was conducted in Choma Rural District at one rural health center, because most of the women who end up dying in pregnancy, childbirth or postpartum are usually from Choma Rural District (Choma DHMT, 2005; Choma General Hospital maternity register, 2008-2009). The study was conducted in one Health Center and its' catchment area, namely, Mapanza Rural Health Center which lies 75 km west of Choma town. The health center offers both preventive and curative services with Maternal and Child Health services and it has 5 health posts. The center has a radio for easy communication with Choma DHO and other health centers. They are open 24 hours a day. The study was both community and clinic based. The interviews were held with women in the community while focus group discussions were conducted at the health center.

The community was chosen as a study site to make the setting as natural as possible to the respondents which could encourage them to bring out their responses as naturally as possible because their own home gives a sense of security and it is none threatening to them. The community was also likely to avail the researcher with the target population.

3.4 STUDY POPULATION

A study population is the total group of individuals or people or things meeting the criteria of interest of the researcher (Dempsey & Dempsey, 2000; Basavanthapa, 2007). According to CSO (2000), Choma District has a population of 247,606, and of these, 54,473 are women in the childbearing age, with 12,876 estimated deliveries per annum. The study population comprised of 3 830 women in the age group 15- 49 years, from Mapanza Health Center.

3.4.1 Target population

The target population is the entire set of individuals or elements who meet the sampling criteria (Burns & Grove, 2009).

The target population for this study was all women in the child-bearing age (15-49 years of age) in Mapanza who have given birth before, or who were pregnant at the time of the study.

3.4.2 Accessible population

This is the portion of the target population to which the researcher has reasonable access (Burns & Grove, 2009; Oescher, 2006).

For this study, the accessible population was the target population who were available and willing to take part in the study.

3.5 SAMPLE SELECTION

Sample selection involves choosing a group of people, events, behaviors or other elements with which to conduct a study (Burns & Grove, 2009).

The rural health center which was chosen as a study site was purposively selected because it is one of the areas where most women with obstetric complications come from and has the largest catchment population. The list of households was obtained from the Environmental Health Technician and Community Health Worker for each of the 3 villages where the study was conducted, and was used as a sampling frame. The villages were selected using convenient sampling.

Systematic sampling was then used to select the households where respondents were gotten from. Systematic sampling involved selecting every 3rd household on the list, using a starting point that was selected randomly. The first households were randomly selected using random numbers, thereafter; systematic sampling was used to maintain a sampling interval.

From each household, if only one or two women were found who met the inclusion criteria, they were interviewed. Where more than two women were found, simple random sampling was used to select only two women who were interviewed from a single household. Simple random sampling involved writing 'yes' and 'no' on small papers according to number of women found, but only 2 papers had 'yes'. The papers were put in a box, which was then shaken, and each woman picked a paper. The 2 women who picked the papers with 'yes' were interviewed.

3.5.1 Inclusion criteria

- Women in the child bearing age.
- Women 15-49 years of age who had given birth before, or who were pregnant at the time of the study.
- Women in the child bearing age residing at Mapanza.
- Women in child bearing age who had given birth before or who were pregnant at the time of study and consented to participate in the study.

3.5.2 Exclusion criteria

- Women who were not in the child-bearing age.
- Women in the child-bearing age who had never given birth before.
- All men
- Women residing in the urban areas who were found visiting the rural area at the time of the study.
- Women in the child-bearing age who did not consent to be involved in the study.

3.6. SAMPLE SIZE

Uys and Basson (2000) define sample size as the total number of subjects or objects to represent the population under study. The sample size was calculated using Epi Info version 6.0 statistical software. According to Choma District Health Office (CDHO) yearly maternal health report, the population of women at Mapanza rural health center who are in the child-bearing age is 3, 830. This constituted the population size. The expected frequency was set at 86.7% which is the average of knowledge and

perception of women toward danger signs in pregnancy found in Nepal and Kenya respectively. The worst acceptable frequency was +/- 5% which is 91.7% or 81.7%. At 95% confidence interval, the sample size was as indicated below.

Population size for Mapanza H/C	=	3, 830
Expected frequency	=	86.7%%
Worst acceptable	=	81.7%
Confidence interval	=	95%
n	=	169

With the addition of a 10% non-response rate, the final sample size was adjusted as follows: $10/100(169) = 16.9$. Therefore sample size was;

$$n = 169 + 17 = \mathbf{186}.$$

The sample size was calculated with the help of a statistician.

3.7 DATA COLLECTION TOOLS

A data collection tool is a device used in gathering of information needed to address a research problem (Polit & Hungler, 2001). The data collection tools for this study were translated into Tonga which most respondents at the study site understood, to ease and ensure uniformity in data collection.

3.7.1 Semi-structured Interview Schedule (Appendix IV).

In this study, a pre tested interview schedule, translated into Tonga was used to collect data. Data was collected over a period of one month. The tool had a set of pre determined open and closed ended questions with the same wording and order of questions. Closed ended questions allow quick recording of responses and save on time (Polit, Beck & Hungler, 2001). Open ended questions permit free expression in answering and are likely to bring out more valid responses (Polit, Beck & Hungler, 2001).

The interview schedule was chosen as a data collection tool because it is appropriate and catered for illiterate respondents, since the study was done in a rural area where both literate and illiterate respondents were found, and ensured that all questions were answered. It also gave the interviewers chance to observe any non-verbal cues, allowed for probing, and it allowed for clearing of any misunderstandings during the interview.

The interview schedule comprised 4 sections. Section A comprised questions on the respondents' demographic characteristics. Section B elicited knowledge about danger signs in pregnancy, section C consisted of questions on service related information and section D comprised questions on perception towards danger signs in pregnancy. The other items on the interview schedule included the date and place of interview, name of interviewer serial number and instructions for the interviewer.

Polit, Beck and Hungler (2001) state that the disadvantages of using an interview schedule are that the presence of the interviewer may make the interviewee not give precise and accurate responses, if the interviewee is not verbally expressive, and that research assistants need to be trained in data collection. This was minimized by creating rapport with the respondents and to ensure uniform understanding and recording of responses, the researcher involved research assistants in the pilot study to note any areas where they needed more emphasis.

3.7.2 Focus Group Guide (Appendix v)

Focus Group Discussions (FGDs) were conducted at the health center because that is where a bigger number of women were found at the same time. A Focus Group Discussion refers to interviews with groups of about 6 to 10 participants whose opinions and experiences are solicited simultaneously (Burns & Grove, 2009). Purposive sampling was used to select 14 women from the health center who were attending the Maternal and Child Health clinic. These took part in the FGDs, and were not part of those who were interviewed individually. Women who were included in the FGDs were women in the child-bearing age who have given birth before or were pregnant at the time of the study, and were willing and available to take part in the study. All women who were not in the child-bearing age were excluded, together with all men and those

who resided in other areas but were found visiting at the clinic. Women in the child-bearing age who had never given birth before were also excluded.

Two focus group discussions were conducted, which comprised of 7 participants each, separated according to age groups to facilitate free discussion. One group comprised of younger women (aged from 15-30 years) while the other group comprised of older women (31-49 years).

The Focus Group Guide comprised 5 sections. Section A comprised questions on knowledge about danger signs in pregnancy, section B comprised of questions on reception by health workers, section C consisted of questions on cultural beliefs. Section D consisted of questions on perception towards danger signs and section E elicited responses on suggestions for improving knowledge about danger signs in pregnancy. The other items on the Focus Group Guide included place and date of interview, number and composition of participants and instructions to interviewer.

Burns and Grove (2009) state that focus group discussions are good because group dynamics can help people to express and clarify their views in ways that are less likely to occur in a one-to-one interview. The group may give a sense of “safety in numbers” to those wary of researchers or those who are anxious. However, Polit, Beck and Hungler (2001) state that FGDs may fail to bring out people’s views because some people are uncomfortable expressing their views or describing their experiences in front of a group. Participants were encouraged to actively participate by giving each one of them chance to express their views. Some of the participants who were very talkative were thanked for their contributions but asked to give chance to the quiet ones to also express their views so that the discussions were not dominated by the very talkative ones. Participants were assured of confidentiality and anonymity of all the data collected and this encouraged maximum participation (Appendix 1).

3.7.3 Validity

Validity is the extent to which inferences made on the basis of scores from an instrument are appropriate, meaningful and useful, or the extent to which the calculated statistics accurately portray the actual relationships (Oescher, 2006).

To ensure validity, extensive literature review has been conducted on recent literature on knowledge and perception of women towards danger signs in pregnancy. Maternal and Child Health experts and research supervisors examined the questions to determine whether they would elicit the desired responses on the variables to be measured so that conclusions would be drawn with respect to the study population. In addition, the questions were constructed in a simple, clear and precise way in order to give respondents chance to give clear and precise answers which would bring out their knowledge and perceptions of danger signs in pregnancy. Methodological triangulation was also used to examine complex concepts, by combining qualitative and quantitative methodologies within the study.

3.7.4 Reliability

Reliability refers to the consistence of measurement (Oescher, 2006; Burns & Grove, 2009). Reliability may be affected by deficiency in the instrument, or inconsistency in taking readings from the instrument.

To ensure reliability, a variety of open ended questions were used in the interview schedule to allow for spontaneous responses which give more valid answers. All questions were asked to each participant in the same sequence, with probes and prompts made at the same points. FGDs were conducted to solicit people's opinions and experiences. Research assistants were also trained in research methods for 5 days to ensure consistency and uniformity in data collection. The research assistants were female midwives who are knowledgeable about the danger signs in pregnancy, and these encouraged women to talk because women discuss sensitive issues more freely with fellow women and this is culturally appropriate. A pilot study was carried out to check whether the instruments were able to bring out consistent information about women's knowledge and perception of danger signs in pregnancy. Adjustments to the data collection tool were then made appropriately.

3.8 DATA COLLECTION TECHNIQUES

This refers to a method used to systematically gather information relevant to the research purpose, or the specific objectives, questions or hypotheses of a study (Burns & Grove, 2009).

The data collection techniques that were used for this study were face to face interviews and FGDs.

3.8.1 Data collection technique for quantitative data

The study participants were interviewed using an interview schedule, translated into Tonga. Each study participant was interviewed in their own home for 20 to 30 minutes, in a private place that the respondent provided. All interviews were conducted between 08:00 and 16:00 hours, in the community at participant's own homes. Interviews were conducted in Tonga. Each interviewer conducted 10 to 15 interviews per day to leave time for sorting out and checking for completeness of questionnaires before leaving the study site.

Self introduction was made by the researcher and research assistants to each participant before starting each interview to create rapport and make participants to relax. Purpose of the study was truthfully explained to each participant. Interviewers followed instructions on interview schedule to standardize the interview technique. Questions were asked the way they were written, without influencing the answers. Questions not understood were merely repeated without paraphrasing them or indicating the direction of the answer.

The researcher and her assistants ensured respondents' comfort at all times by considering their priorities, or where not possible, explaining to them. Patience was exercised and respondents were given time to think through the question and respond. Respondents were politely asked to repeat answers not understood by the interviewers. All responses were recorded right away to avoid missing any of them. At the end of each interview, respondents were given time to ask questions, which were answered accordingly. Respondents were thanked at the end of each interview.

3.8.2 Data collection technique for qualitative data

FGDs were conducted at the clinic in a private room that was provided using a focus group discussion guide designed by the researcher. The researcher moderated the discussions and asked the questions. A tape recorder was used to record the whole discussion. Before each discussion began, the researcher introduced herself to the respondents and asked them general questions about their families, the rains and whether they had already planted their crops. This was to make participants at ease. The tape recorder was shown to the participants and its purpose explained. The purpose, risks, and benefits of the study were explained to the respondents, and confidentiality was assured. Participants were then assigned numbers to ease discussions because their names were withheld to maintain confidentiality. Permission was sought from the participants to begin the discussions, and they were all encouraged to participate. The discussions were conducted in Tonga, which was the main language of the people in Choma district. Using the focus group discussion guide, the researcher initiated the discussion by introducing the topic for discussion and asking participants to discuss freely, and moderated the discussion. The discussions lasted approximately 40 minutes each. At the end of the discussion, participants were given chance to ask questions which were answered. Each participant was thanked at the end of the discussion.

3.9 PRE TEST

A pre test is the process of measuring the effectiveness of the instrument used to gather data (Basavanthappa, 1998). A pre test is used to determine whether data collection tools actually measure what they are supposed to measure and is used on subjects who meet the criterion for the study sample (Basavanthappa, 1998).

A pre test was conducted at Batoka rural health center with a catchment population of 12754. The health center provides both curative and preventive services, including antenatal care services.

The center was chosen for conducting the pilot study because it has similar characteristics to the study population that was included in the main study. Thereafter,

adjustments were made to the data collection tool as necessary. The sample for the pre test comprised 10 % of the study sample, which was 19 respondents. One village from the health center catchment population was conveniently selected to conduct the pilot study. The first household was randomly selected using random numbers and thereafter, households were systematically selected and participants were interviewed using an interview schedule. If more than two eligible respondents were found in a household, simple random sampling was used to select only two respondents from each household.

One focus group discussion was conducted with 7 women in the age group 15 to 30 years to facilitate free discussion. These respondents were not part of those who were interviewed individually.

After the pre test, a few adjustments were made to the interview schedule as follows;-

- A provision was made on question 6 for respondents who had no monthly income.
- Respondents who responded that they had never heard of danger signs in pregnancy on question 9 were, at that point, told the danger signs to enable them answer questions 14 downwards.
- Question 27 was adjusted to include a provision for less than 5 minutes on time spent with the health worker.

The pre test helped identify weaknesses in the data collection tools.

3.10 ETHICAL CONSIDERATION

Ethical consideration refers to ethics which are codes of conduct in the implementation of research to produce a systematic and verifiable knowledge (Wehmeier, 2000).

Ethical clearance was obtained from the University of Zambia Research Ethics Committee. Written permission to conduct the study was obtained from Choma District Health Management Team and the District Commissioner's office.

Verbal permission was obtained from the health center, Community Health Workers and village headmen where the study was conducted.

The purpose of the study was explained and written consent was obtained from each respondent before the study. Those that did not consent to participate in the study were reassured that they would suffer no consequences as a result of not participating. Those who consented were asked to put their right thumb print or sign a consent form, which was explained fully to them. They were not remunerated in any way. Study subjects were told that they were free to withdraw from the study at any time without suffering any consequence.

Interviews and discussions were conducted in private rooms or shelters which were offered by the participants and staff at the clinics respectively. The respondents were assured of anonymity by using serial numbers on the interview schedules instead of writing their names. After data collection, the interview schedules and FGDs were kept under lock and key. No one, apart from the researcher was allowed access to the collected data.

Participants were not subjected to any physical harm as the study did not involve invasive procedures.

CHAPTER FOUR

4.0 DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 INTRODUCTION

Data analysis is the systematic organization and synthesis of research data and the testing of research hypothesis using those data (Polit, D. F & Hungler, B. P, 1999).

Data were collected using interview schedules and a focus group guide. Interview schedules were used on 186 respondents and there was 100% response rate, and the Focus Group Guide was used on 2 groups of 7 women each, consisting of younger and older women respectively. The data were collected from 3 villages in Mapanza area in Choma Rural District. Pilot study was done at Batoka, one of the Rural Health Centers in Choma District, after which the main study was undertaken.

4.2 DATA PROCESSING AND ANALYSIS

4.2.1 DATA ANALYSIS

Data analysis entails reducing, organizing and giving meaning to the data (Burns & Grove, 2009). After data were collected, the data collecting instruments were checked for completeness, consistency, legibility and accuracy daily. Interview schedules not completely filled in were clarified by going back to the respondents to ask for clarifications.

Categorization of open ended questions, which involved reading through all responses and grouping answers that belonged together, was done. This enabled the researcher to report percentage of respondents giving answers that fell in each category. Codes were assigned to each category, entered and analyzed using Statistical Package in Social Sciences (SPSS) version 16 program. Coding is the process of transforming data into numerical symbols that can be entered easily into the computer (Burns & Grove, 2009).

Closed ended questions were assigned numerical codes and entered into the computer and analysis was carried out using SPSS version 16 program. Confidence interval was

set at 95 %. This means that if the experiment were repeated several times and confidence limits were calculated from each sample, 95 % of the time they would include the true mean. Confidence interval is the range in which the value of the population parameter is estimated to be (Burns & Grove, 2009). A 5 % level of significance was set, only p values of 0.05 or less were considered statistically significant, thereby rejecting the null hypothesis.

The Chi-Square test was used to test for associations between independent variables and dependent variables, which are knowledge and perception of women about danger signs in pregnancy. Data were displayed in 2 by 2 tables with 1 degree of freedom. Data were presented using frequency tables, histograms, pie charts and cross-tabulations to communicate research findings.

Content analysis was used to analyze data from FGDs. Focus group data were transcribed, and translated. A full report of the Focus Group Discussions reflecting much of the information discussed was prepared. Data were analyzed at both the individual level and group level, with participant's own words used to list the key statements, ideas, and attitudes. Comparisons were made across groups and consensus and interest in the topic generated in the discussion was attended to. Organization and integration of narrative, qualitative information according to emerging themes and concepts was done. The findings were then interpreted and the most useful information that emerged from the discussions was selected to illustrate the main ideas.

4.2.1.1 Quantitative data

The interview schedules used were counted and checked for completeness, legibility, accuracy and consistency. Answers from closed ended questions were coded and entered on the computer using SPSS version 16. Answers from open ended questions were read through, and answers that belonged together were grouped, a process known as categorization (Polit & Hungler, 1999). Numerical codes (1, 2, 3 and others) were then assigned to each group and the data were entered on the computer using SPSS version 16. Chi-square was used to test for associations between independent and dependent variables. Independent variables were level of education, cultural

beliefs, number of antenatal visits, quality of services and parity. The cut off point for statistical significance was set at 5%, and p values of 0.05 or less were considered statistically significant, thereby rejecting the null hypothesis.

4.2.1.2 Qualitative data

After each focus group discussion, the tape recorder was played to the participants to check for consistency of the information recorded and study participants were asked to clarify any points which were not clear. Transcription of the data was done which involved writing a full report of the focus group discussions in Tonga. The data were then translated into English, using participants' own words and expressions. Data were read through to get the key points and general ideas expressed. Content analysis, which involves classifying words in a text into a few categories chosen because of their theoretical importance (Burns & Grove, 2009) was used to analyze data. Answers from the 2 groups of women (the younger and the older women) were compared.

4.3 DATA PRESENTATION

4.3.1 Quantitative data

Research findings have been presented according to the sections of the interview schedules. Some data have been grouped together to give an overall picture. Data have been presented using frequency tables, pie charts, histograms and cross-tabulations to communicate research findings. Tables were used because they are easy to understand and can be used for all types of data. Charts were used to avoid monotony in data presentation, while cross-tabulations were used to show relationships between variables

Table 2 in section A communicates the demographic characteristics of respondents and the tables, bar charts and pie charts in section B represent respondents' knowledge about danger signs in pregnancy. Section C represents health related information, and the tables and pie chart in section D represent respondents' perception about danger signs in pregnancy. The cross-tabulations represent the relationship between variables.

4.3.2 Qualitative data

Focus group discussion data were summarized using a narrative. The narratives from the research participants have been presented in the discussion chapter.

SECTION A

BACKGROUND INFORMATION ON RESPONDENTS
TABLE 2: DEMOGRAPHIC DATA

Variable	Frequency	Percentage
Age		
15-24 years	67	36
25-34 years	74	39.8
35-44 years	37	19.9
45-49 years	8	4.3
Total	186	100
Marital status		
Single	35	18.8
Married	139	74.7
Separated	5	2.7
Widowed	7	3.8
Total	186	100
Education level		
None/primary (low)	101	54.3
Secondary	75	40.3
College	10	5.4
Total	186	100
Occupation		
Housewife	85	45.7
Formally employed	11	5.9
Self employed	53	28.5
Unemployed	37	19.9
Total	186	100
Monthly income		
Below k500,000.00/no income (low)	172	92.5
K500,00 to above k1,000,000.00(high)	14	7.5
Total	186	100
Owns electronic media		
Yes	116	62.4
No	70	37.6
Total	186	100
Number of children		
None	10	5.4
1-4	118	63.4
5 and above	58	31.2
Total	186	100

In Table 2, 74 (39.8%) respondents were aged 25-34 years, followed by 64(36%) who were aged 15-24 years old. The least age group represented was 45-49 years which had only 8 (4.3%) respondents interviewed. The majority of the respondents 139

(74.7%) were married and 35 (18.3%) of them were single.*Respondents who were divorced were categorized under single ones.

All of the respondents 186 (100%) were Christian, and majority of them 101 (54.3%) had low education (none or primary). A number of respondents 75(40.3%) had secondary education. *Respondents who had no formal education were categorized under those with primary education

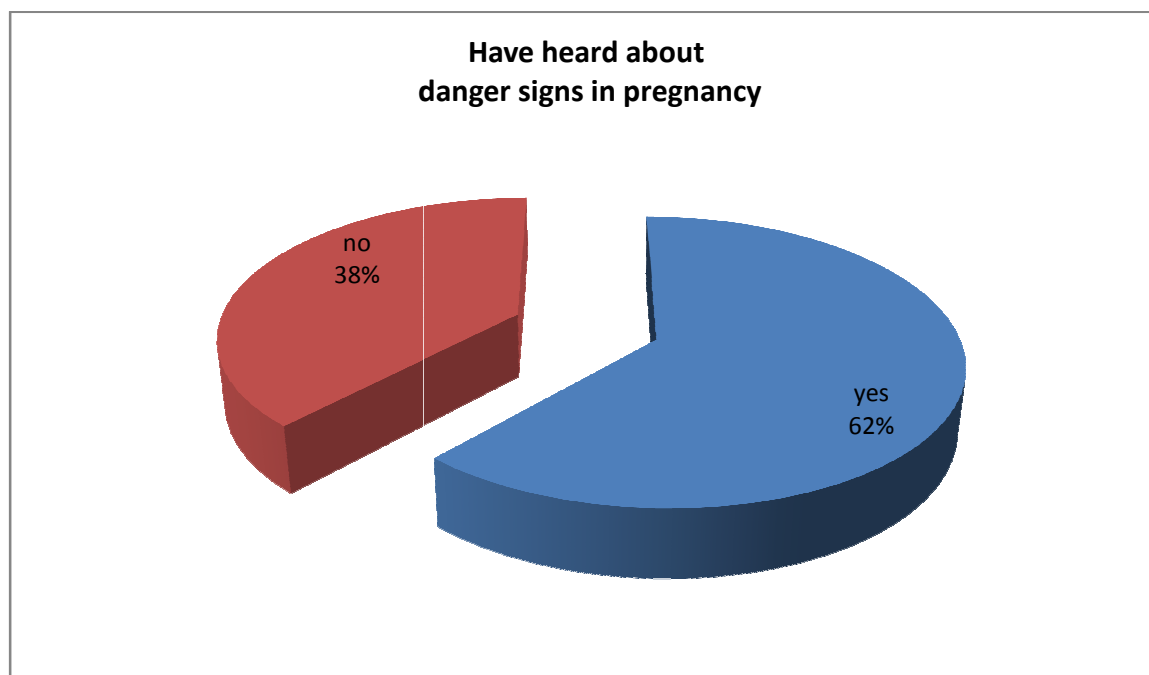
Most of the respondents 85 (45.7 %) were housewives and only 11 (5.9%) were formally employed. The majority 119 (64%) of the respondents had no monthly income. *Respondents who had an income of K500, 000 - K1, 000,000 were categorized under those whose income was K1, 000,000 and above, and those with no income were categorized under those with an income of below K500, 000. However, most of the respondents 116 (62.4%) owned some form of electronic communication media.

The majority 118 (63.4%) of respondents had 1 - 4 children, followed by 58 (31.2%) of the respondents who had 5 children and above. Only 10 (5.4%) of the respondents had no children.

SECTION B

KNOWLEDGE ABOUT DANGER SIGNS IN PREGNANCY

FIGURE 2: HAVE HEARD ABOUT DANGER SIGNS IN PREGNANCY (n=186)



Majority (61.8%) of respondents had heard about danger signs in pregnancy.

TABLE 3: DEFINITION OF DANGER SIGNS IN PREGNANCY (n=186)

Definition of danger signs	Frequency	Percentage
Defined danger signs correctly	102	54.8
other	84	45.2
Total	186	100

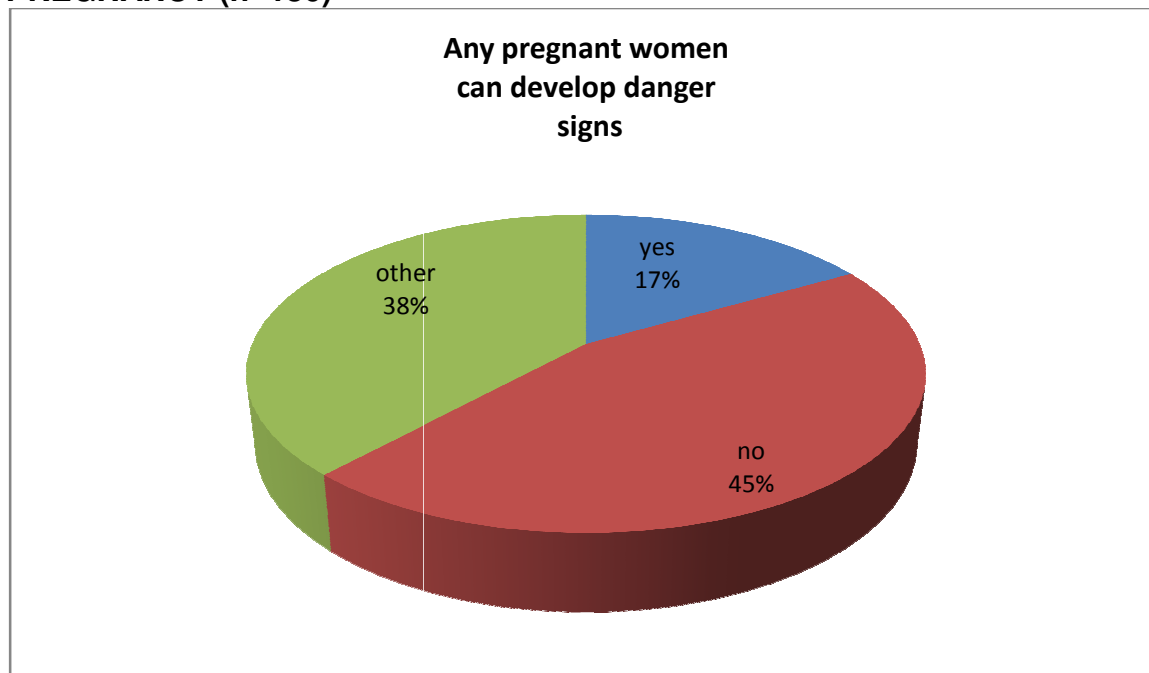
Most of the respondents (54.8%) defined danger signs in pregnancy correctly. A number (45.2%) of them gave wrong definitions or did not manage to define danger signs.

TABLE 4: SOURCE OF THE INFORMATION ABOUT DANGER SIGNS (n=186)

Information source	Frequency	Percentage
Health personnel	73	39.2
Relatives/ friends	23	12.4
media	9	4.8
other	81	43.6
Total	186	100

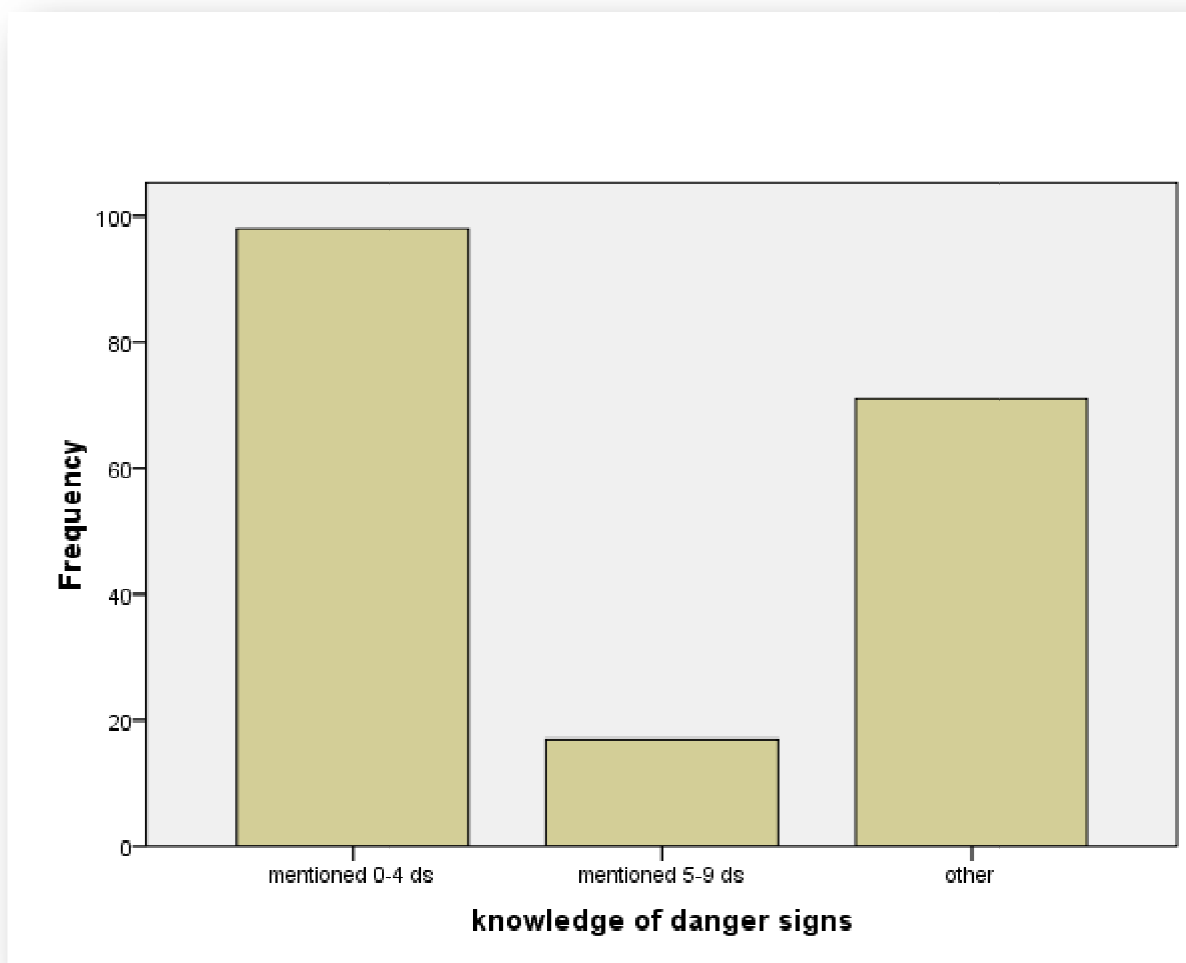
Most (39.2%) of the respondents' source of information about danger signs in pregnancy were health workers while 12.4% got the information from relatives and friends. The other respondents (43.6%) mentioned other sources and out of the 43.6%, some gave no answer to this question.

FIGURE3: ANY PREGNANT WOMAN CAN DEVELOP DANGER SIGNS IN PREGNANCY (n=186)



A number (45.2%) of respondents said that not every pregnant woman could develop danger signs in pregnancy. Only 16.7 % of respondents said that any pregnant woman is at risk of developing danger signs in pregnancy.

FIGURE 4: KNOWLEDGE ABOUT DANGER SIGNS IN PREGNANCY (n=186)



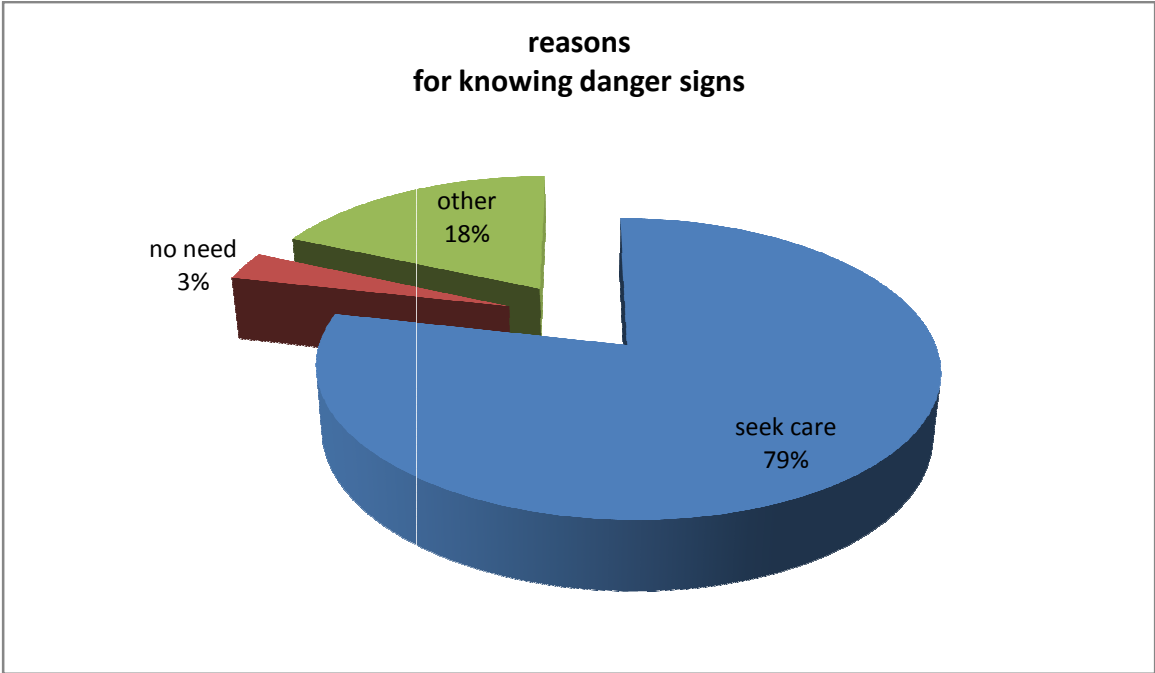
The majority of respondents 98 (52.7%) were able to name 1-4 danger signs, with only 17 (9.1%) naming 5-9 danger signs. The 71 (38.2%) respondents did not answer this question.

TABLE 5: IMPORTANCE OF WOMEN KNOWING ABOUT DANGER SIGNS IN PREGNANCY (n=186)

Importance of knowing danger signs	Frequency	Perception
Yes	170	91.4
No	16	8.6
Total	186	100

The majority (91.4%) of women said it is important that all women have knowledge about danger signs in pregnancy. Only 8.6% said women should not know about them.

FIGURE 5: REASONS FOR KNOWING DANGER SIGNS IN PREGNANCY (n=186)



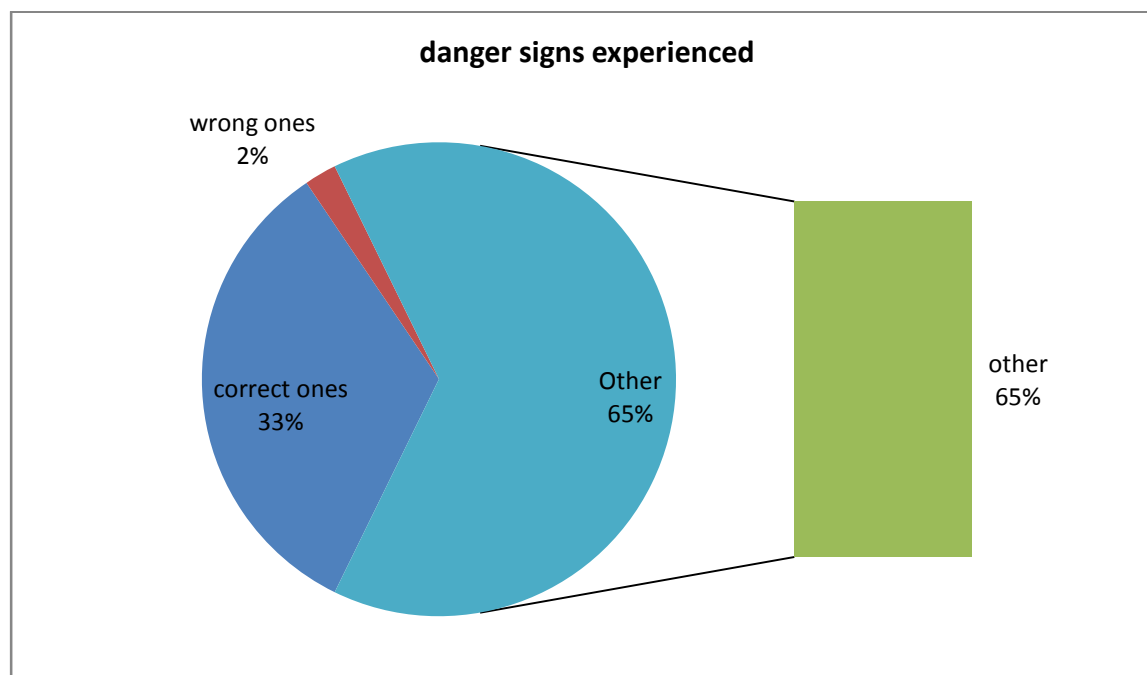
Majority (78.5%) of the respondents said women should know danger signs in pregnancy to enable them seek medical care quickly if they experienced them. A number (18.3%) of respondents gave other reasons for knowing danger signs, while 3.2% of them said there is no need for women to know danger signs.

TABLE 6: HAD EXPERIENCED DANGER SIGNS IN PREGNANCY (n=186)

Experienced danger signs	Frequency	Perception
Yes	65	34.9
No	121	65.1
Total	186	100

Fewer (34.9%) respondents had experienced danger signs in pregnancy before, while the majority (65.1%) had never experienced them.

FIGURE 6: DANGER SIGNS EXPERIENCED (n=186)



The majority (65%) of respondents did not answer this question, while 33 % mentioned correct danger signs experienced. A fraction (2%) of respondents mentioned wrong danger signs.

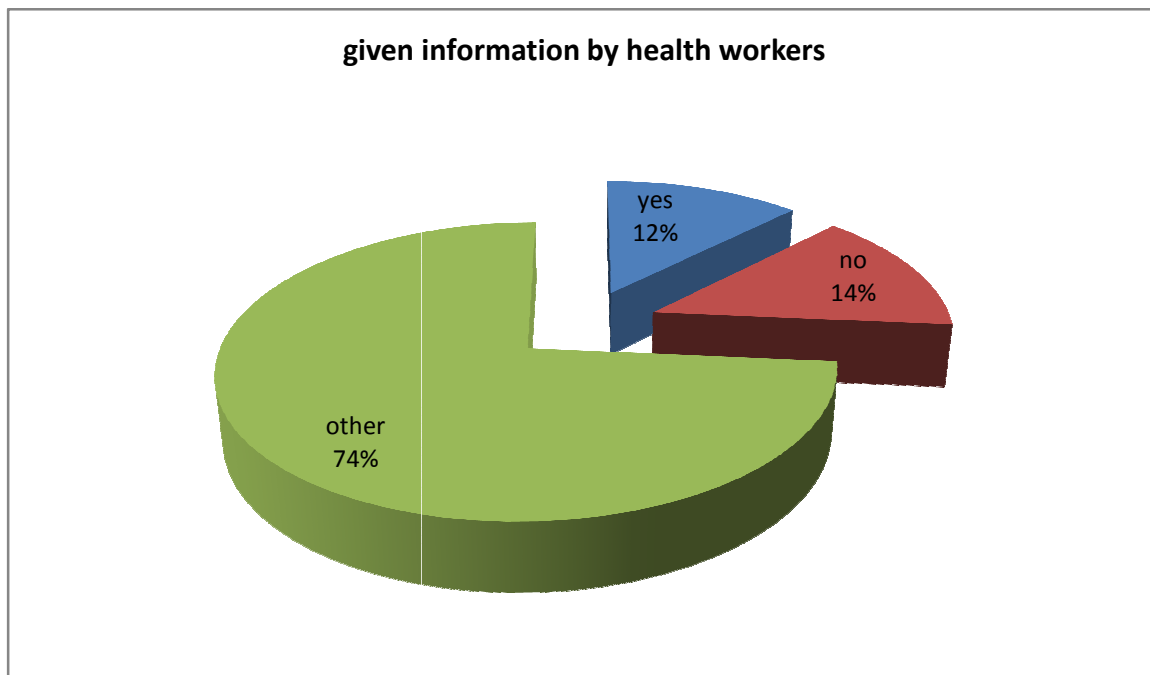
TABLE 7: ACTION TAKEN FOR DANGER SIGNS EXPERIENCED (n=186)

Action taken	Frequency	Percentage
Sought medical care	49	26.3
Sought help from traditional healers	2	1.1
Stayed home	14	7.5
Sought help from older women	1	.5
other	120	64.5
Total	186	100

Most (26.3%) of those who had experienced danger signs sought medical care for danger signs experienced. Some of them (7.5%) stayed home, while 64.5% gave no

answer to this question because they never experienced danger signs in pregnancy before.

FIGURE 7: GIVEN INFORMATION ON DANGER SIGNS EXPERIENCED BY HEALTH WORKERS (n=186)



Majority (74%) of the respondents did not answer this question as they never experienced danger signs before, but 12 % were given information about the danger signs they experienced by health workers, while (14.0%) were not given any information.

TABLE 8: TYPE OF INFORMATION GIVEN (n=186)

Type of information given	Frequency	Percentage
Danger signs explained and actions to be taken for danger signs	24	12.9
other	162	87.1
Total	186	100

Only 12.9% of the respondents were given information about the danger signs which they had experienced.

TABLE 9: RISK FACTORS FOR DEVELOPING PREGNANCY COMPLICATIONS (n=186)

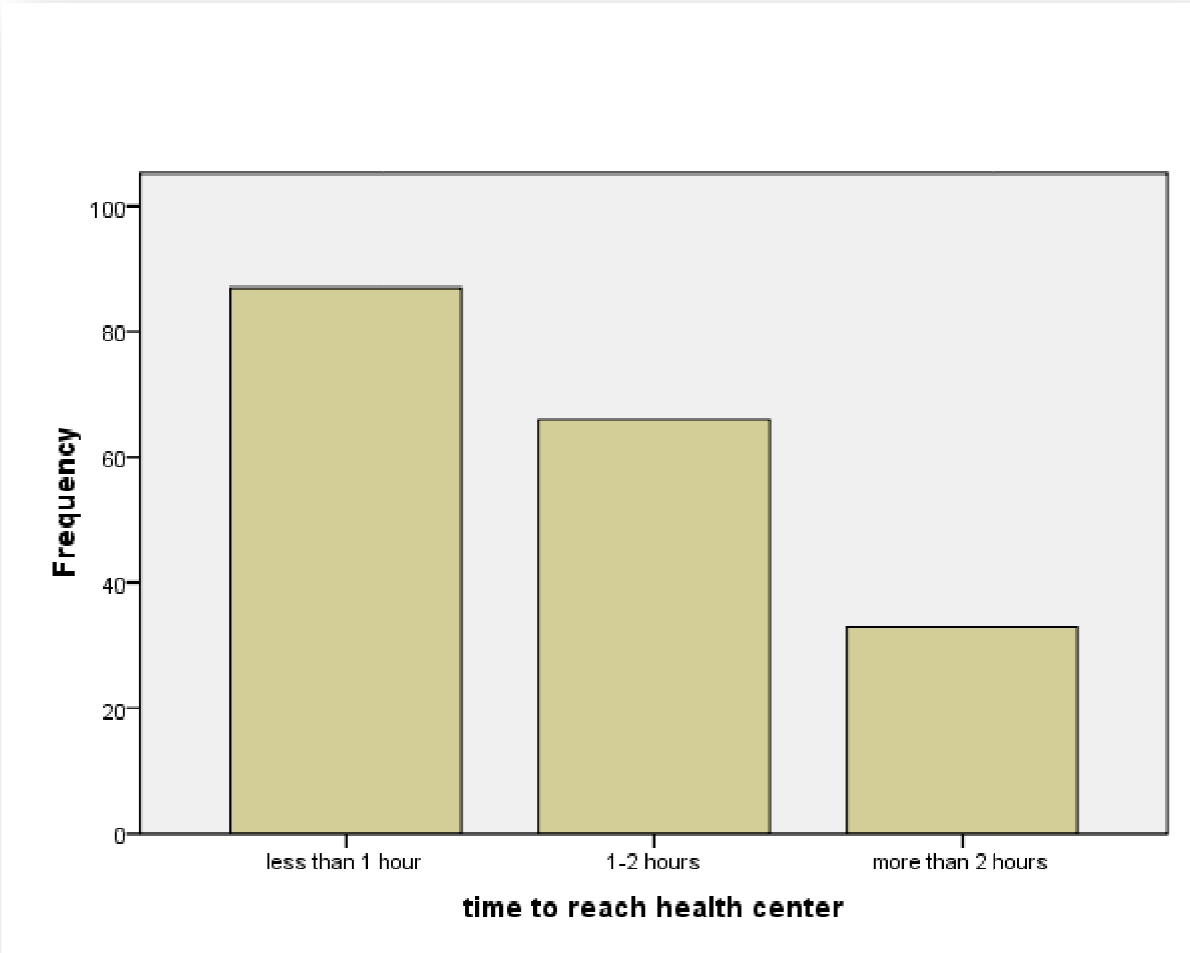
Risk factors	Frequency	Percentage
Mentioned 3-4 correctly	12	6.5
Mentioned 1-2 correctly	99	53.2
Don't know	75	40.3
Total	186	100

Majority (53.2%) of the respondents were able to mention 1-2 risk factors correctly, while only 6.5% mentioned 3-4 risk factors correctly. A number of them (40.3%) did not know.

SECTION C

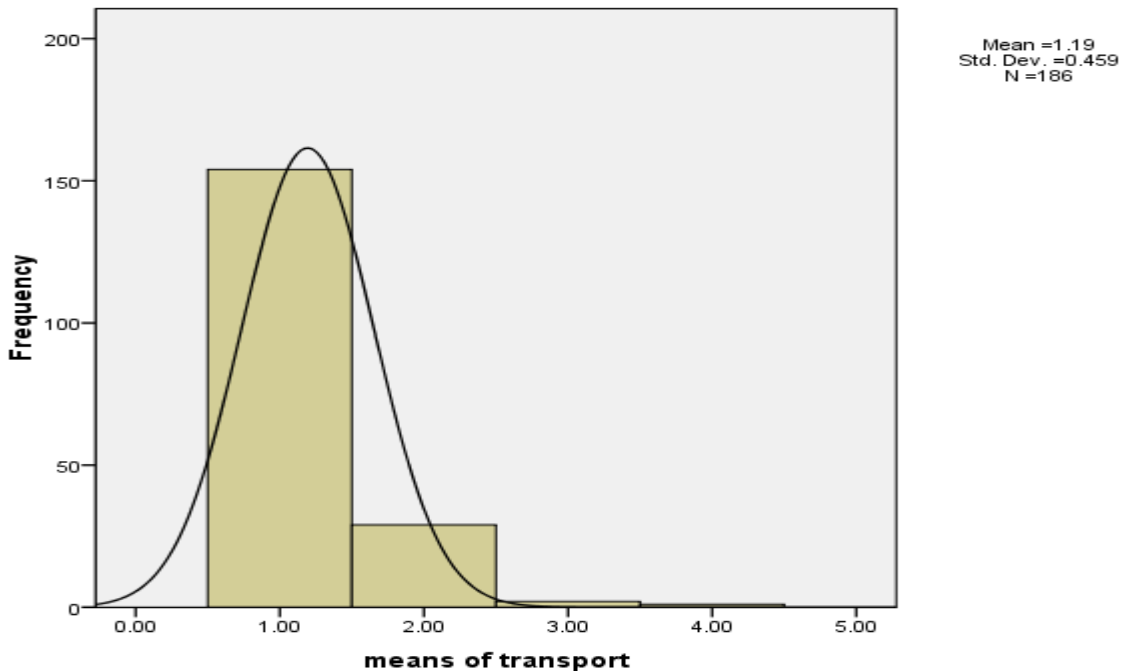
SERVICE RELATED INFORMATION

FIGURE 8: TIME TAKEN TO REACH HEALTH CENTER (n=186)



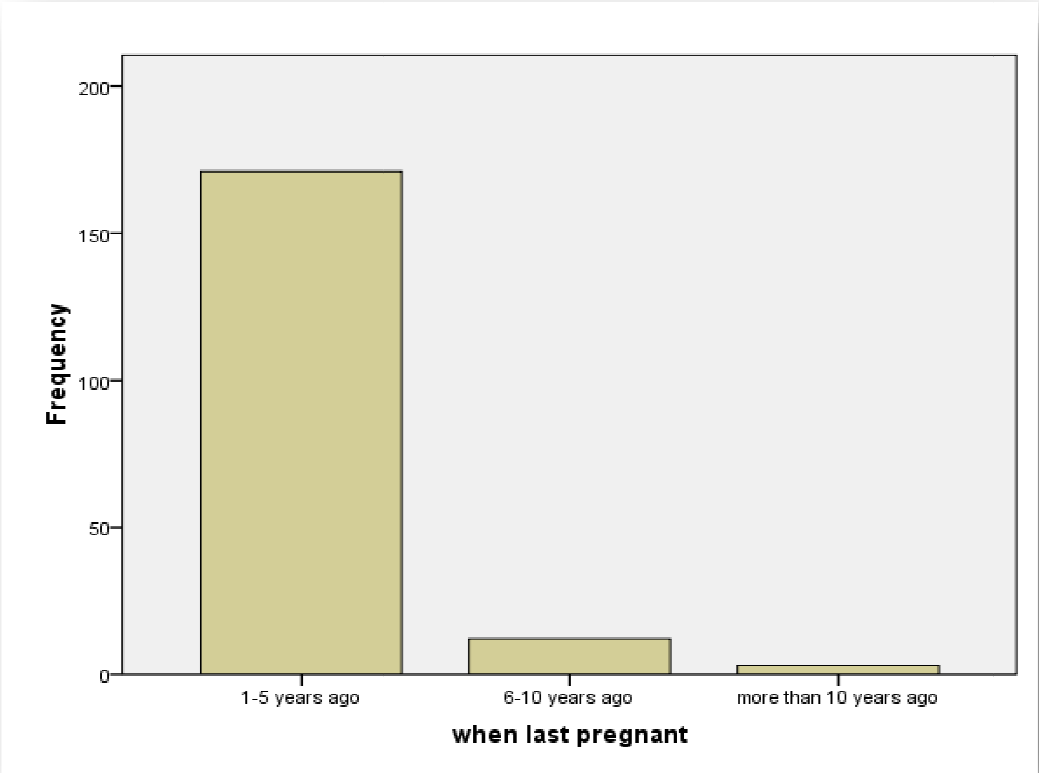
Most of the respondents 87 (46.3%) took about an hour to reach the health center, while 33 (17.7%) took more than 2 hours to reach the health center.

FIGURE 9: MEANS OF TRANSPORT USED (n=186)



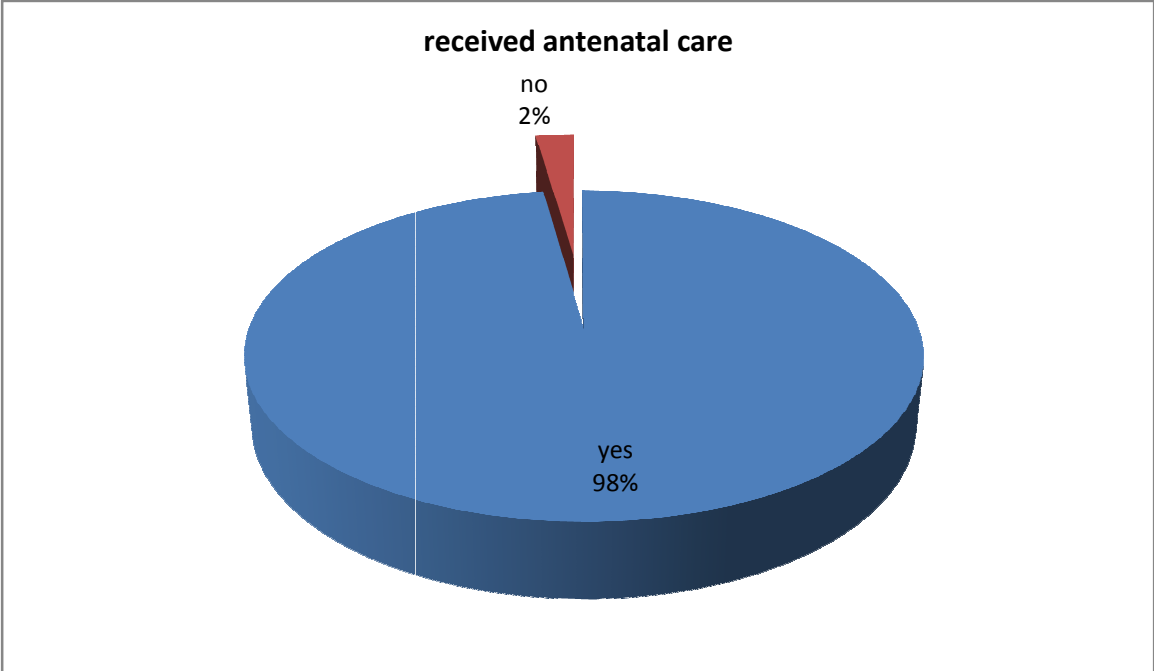
Most 154 (82.8%) respondents travelled to the health center on foot. Some 29 (15.6%) of the respondents used bicycles to go to the health center.

FIGURE 10: LAST PREGNANCY (n=186)



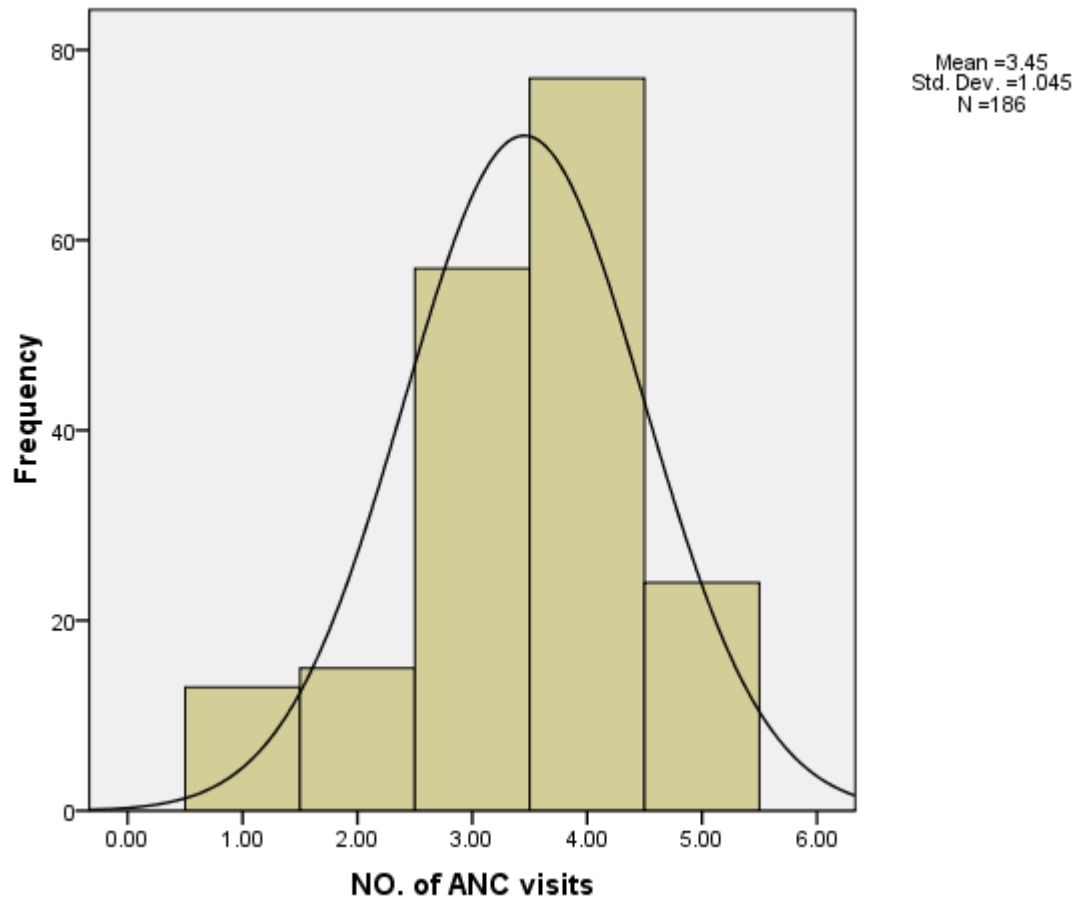
A greater majority 171 (91.7%) of respondents were pregnant in the last 1-5 years prior to the study, with only 3(1.6%) who were pregnant more than 10 years prior to the study. Twelve 12 (6.5) respondents were last pregnant 6-10 years before the study was conducted.

FIGURE11: RECEIVED ANC DURING THEIR LAST PREGNANCY (n=186)



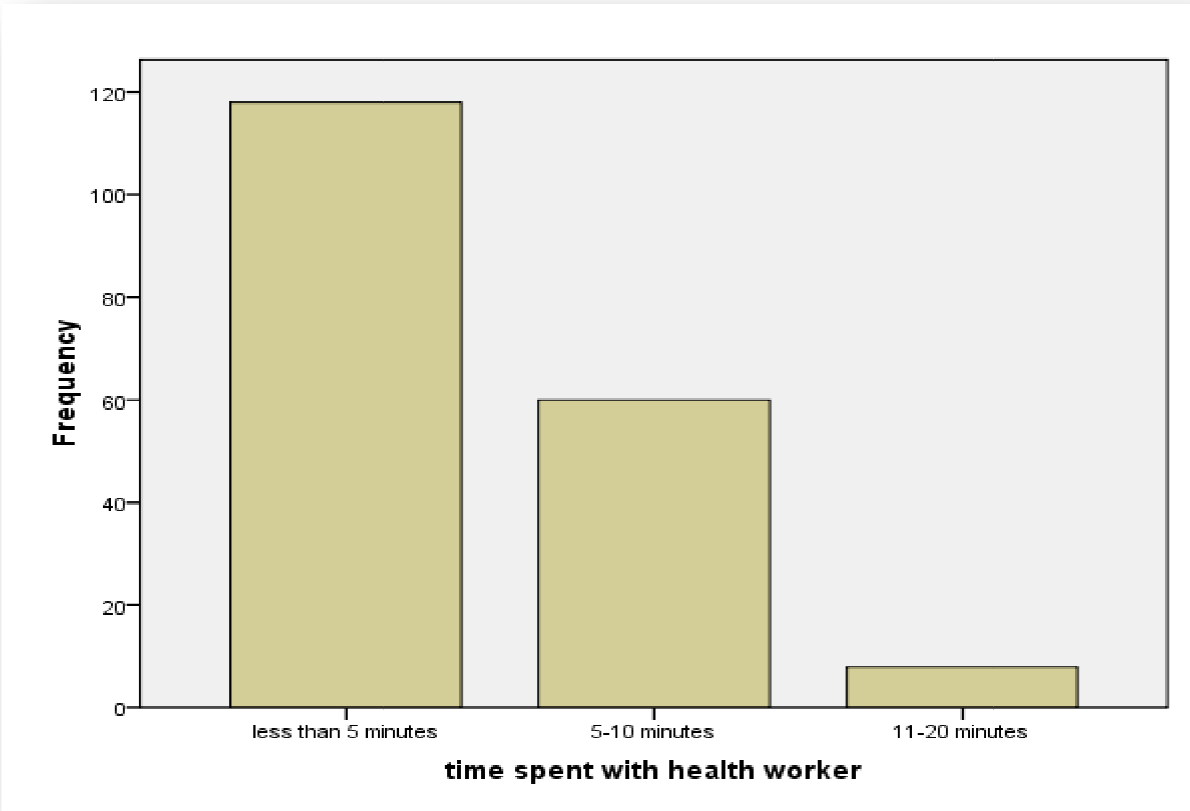
The majority 182 (98%) of respondents received antenatal care during their last pregnancy, with only 4 (2 %) who did not.

FIGURE12: NUMBER OF ANTENATAL VISITS MADE BY THE RESPONDENTS (n=186)



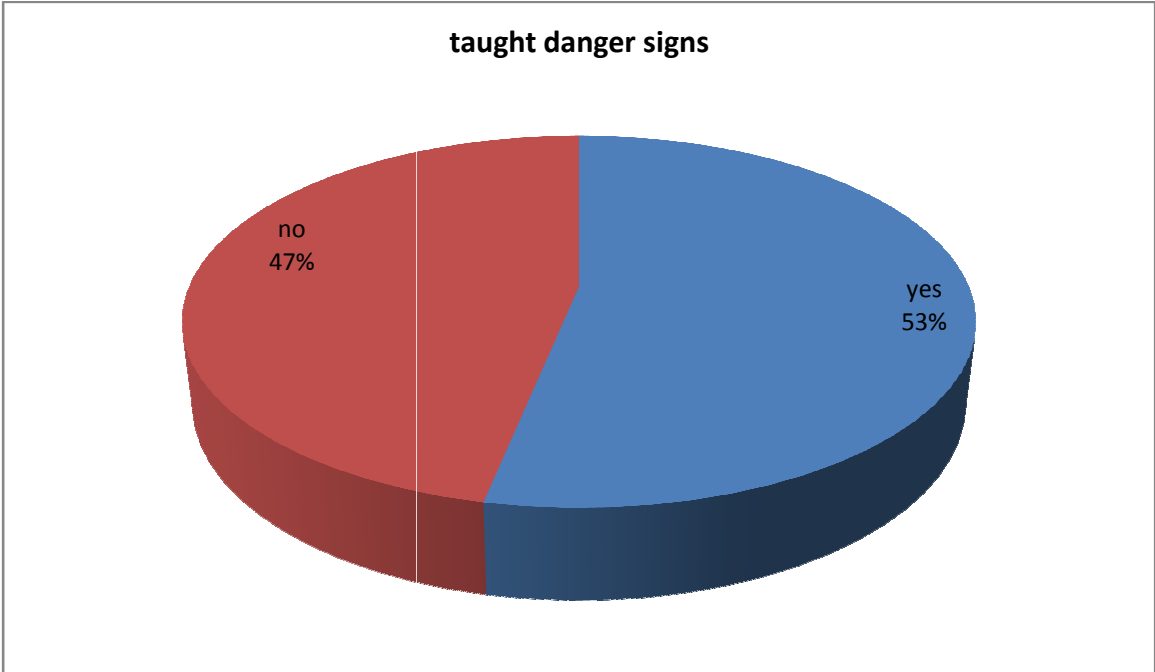
Most of the women 77 (41.4%) had 4 antenatal visits, followed by 57 (30.6%) who had 3 antenatal visits. A number of them 24 (12.9%) had more than 4 antenatal visits.

FIGURE13: TIME SPENT WITH THE HEALTH WORKER (n=186)



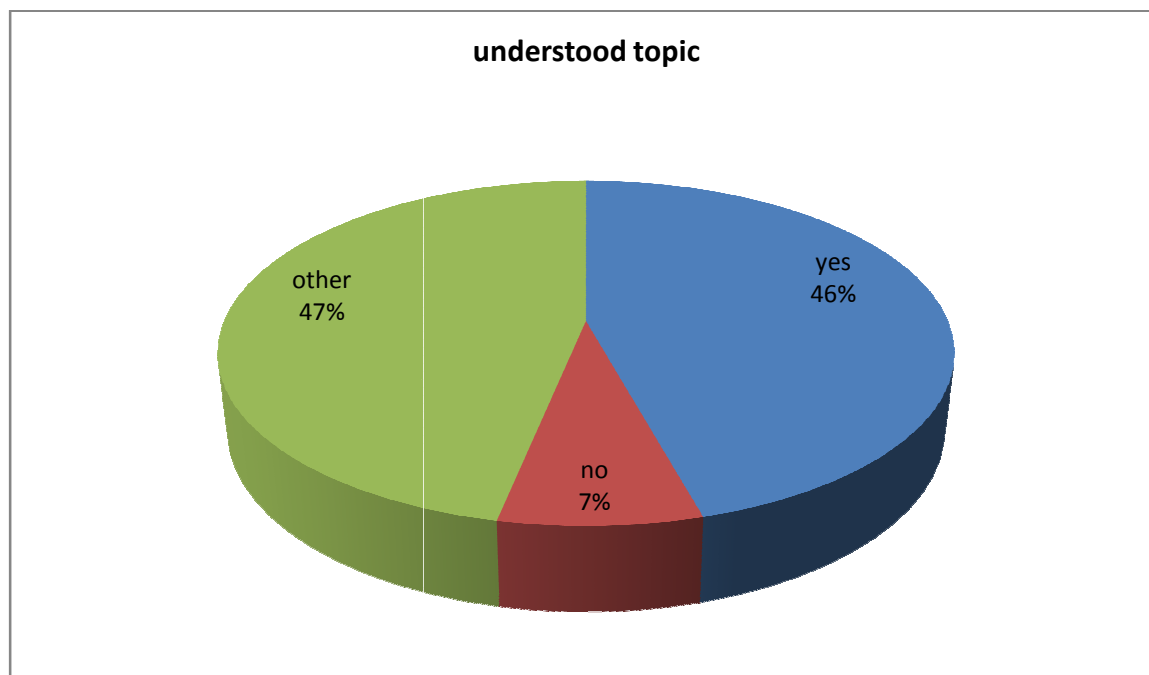
From Figure 14 above, a greater majority of respondents , 118 (63.4%) spent less than 5 minutes individual time with the health worker, followed by 60 (32.3%) of them who spent 5-10 minutes.

FIGURE 14: WERE TAUGHT DANGER SIGNS IN PREGNANCY (n=186)



Most 99 (53%) of the respondents stated that they were taught about danger signs in pregnancy by health workers before, and 87(47%) had never been taught before.

FIGURE15: UNDERSTOOD TOPIC (n=186)



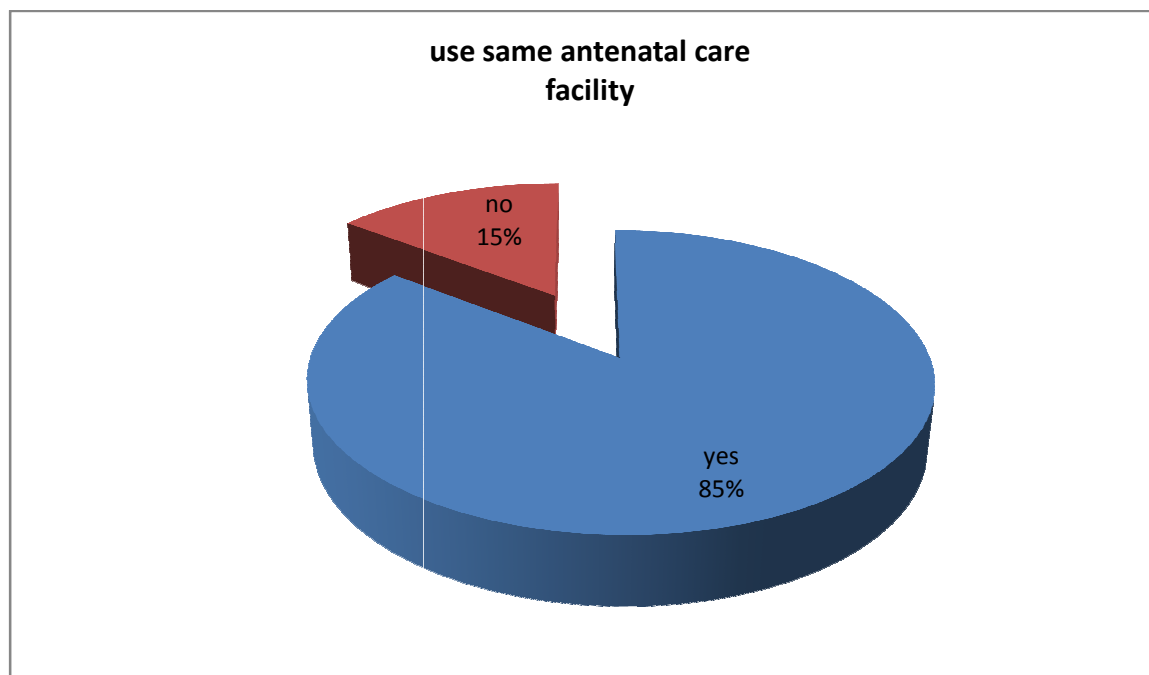
From Figure 16 above, 85 (46 %) of the respondents stated that they understood the topic while 14(7%) did not understand. A number, 87 (47%) of respondents did not answer this question because they were not taught danger signs in pregnancy before.

TABLE 10: GIVEN TIME TO ASK QUESTIONS (n=186)

Given time for questions	Frequency	Percentage
Yes	77	41.4
No	22	11.8
Other	87	46.8
Total	186	100

Most, 87(46.8%) of respondents did not answer this question because they were not taught danger signs in pregnancy before, but 77 (41.4%) of them were given time to ask questions, while 22 (11.8%) were not given time to ask questions after the lesson on danger signs in pregnancy.

FIGURE 16: WOULD USE THE SAME HEALTH FACILITY FOR ANC (n=186)



Most 159 (85%) of the respondents would use the same ANC facility if they became pregnant again, while 27(15 %) would not.

TABLE 11: REASONS FOR USING SAME HEALTH FACILITY FOR ANC (n=186)

Reason for using same ANC facility	Frequency	Percentage
Good services	78	41.9
Bad services	23	12.4
Other	85	45.7
Total	186	100

Most, 85 (45.7%) of the respondents would use the same health facility for some other reasons, while 78 (41.9%) would use the same health facility because of good quality services. Some 23 (12.4%) would not use the same facility due to poor quality services.

SECTION D

PERCEPTION ABOUT DANGER SIGNS IN PREGNANCY

TABLE 12: CAUSES OF DANGER SIGNS IN PREGNANCY (n=186)

Causes for danger signs	Frequency	Percentage
Medical causes	95	51.1
Traditional causes	36	19.4
Other	55	29.6
Total	186	100

Majority 95 (51.1%) of respondents believed that danger signs in pregnancy were due to medical causes, while 36 (19.4%) believed they were due to traditional causes. A number 28 (15.1%) of them believed that danger signs were due to other causes.

TABLE 13: DANGER SIGNS CAN BE PREVENTED (n=186)

Prevention of danger signs	Frequency	Percentage
Yes	124	66.7
No	61	32.8
Don't know	1	.5
Total	186	100

Majority, 124 (66.7%) of respondents believed that danger signs in pregnancy could be prevented, while 61 (32.8%) believed that they could not be prevented.

TABLE14: MODE OF PREVENTION OF DANGER SIGNS (n=186)

Mode of prevention of danger signs	Frequency	Percentage
Getting medical advice	95	51.1
Using herbs and consult with witchdoctors	10	5.4
Faithfulness to sexual partner	9	4.8
Praying	2	1.1
Other	70	37.6
Total	186	100

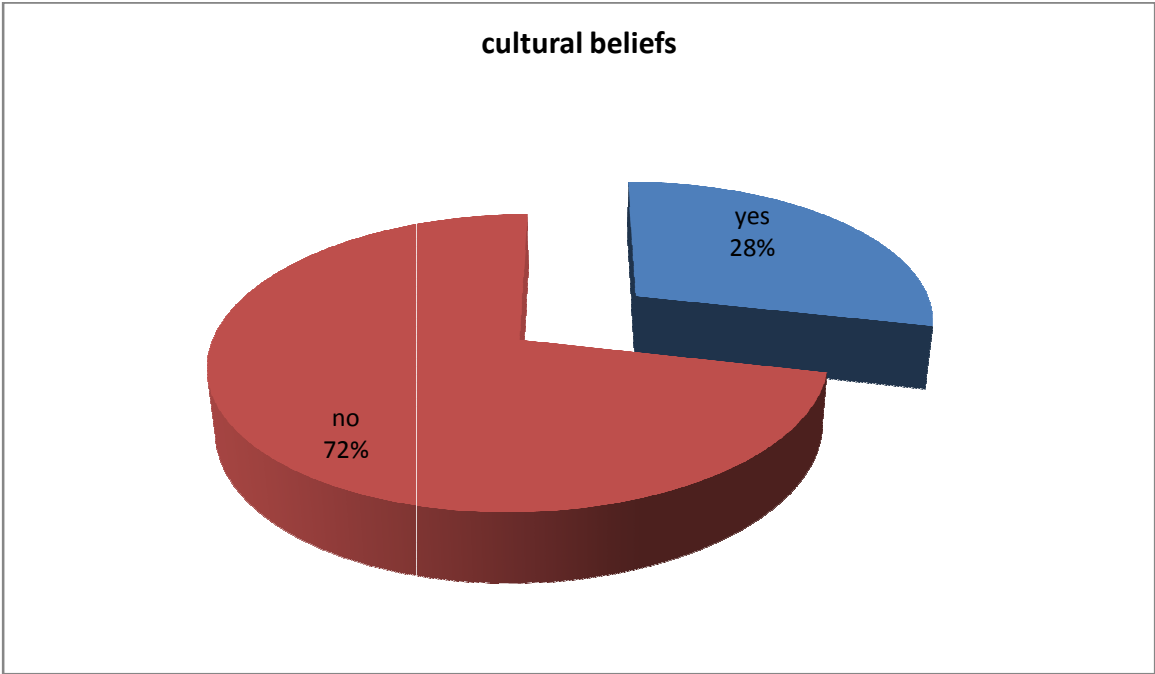
A number, 70 (37.6%) of respondents gave other modes of preventing danger signs, while 95(51.1%) said they can be prevented by getting medical advice, and 5.4% of them said they can be prevented by using herbs and consulting witch doctors.

TABLE 15: ACTION TO BE TAKEN IF A WOMAN DEVELOPED DANGER SIGNS IN PREGNANCY (n=186)

Action to take	Frequency	Percentage
Seek medical advice	143	76.9
Seek help from traditional healer	8	4.3
Seek help from older women	35	18.8
Total	186	100

The majority, 143 (76.9%) of respondents believe that a woman who develops danger signs in pregnancy should seek medical advice, while 35 (18.8%) believe that help should be sought from older women. A smaller percentage 8 (4.3%) believed that a traditional healer should be consulted.

FIGURE 17: HAD ANY CULTURAL BELIEFS HINDERING SEEKING MEDICAL CARE (n=186)



Most 133 (72%) of the respondents had no cultural beliefs that would hinder them from seeking medical advice if they experienced danger signs in pregnancy, while 53(28%) had cultural beliefs that would hinder them from seeking medical advice.

TABLE16: CULTURAL BELIEFS HINDERING SEEKING MEDICAL ADVICE (n=186)

Cultural beliefs known	Frequency	Percentage
Witchcraft leads to bleeding	14	7.5
Marital unfaithfulness causes bleeding, vomiting, abdominal pains and late delivery	34	18.3
Fluidly diet and eating chicken feet causes draining	3	1.6
Tying belt causes cord prolapse	2	1.1
Baby boy, twins and many sexual partners cause edema	4	2.2
Other	129	69.4
Total	186	100

From Table 16 above, majority, 129 (69.4%) of the respondents had no cultural beliefs that would hinder them from seeking medical advice if they experienced danger signs in pregnancy. A number of them 34 (18.3%) believed that marital unfaithfulness by either spouse is responsible for a number of danger signs in pregnancy, while 14(7.5%) believed that bleeding in pregnancy was due to witchcraft.

TABLE 17: OVERALL KNOWLEDGE ABOUT DANGER SIGNS IN PREGNANCY

Knowledge	Frequency	Percentage
Low	132	71
Medium	41	22
High	13	7
TOTAL	186	100

More than half (71%) of the respondents had low levels of knowledge about danger signs in pregnancy. Only 7% of the respondents had high knowledge levels.

TABLE 18: OVERALL PERCEPTIONS ABOUT DANGER SIGNS IN PREGNANCY

Perceptions	Frequency	Perception
Positive	124	66.7%
Negative	62	33.3%
TOTAL	186	100

More than half (66.7%) of the respondents had positive perception towards danger signs in pregnancy.

TABLE 19: ASSOCIATIONS BETWEEN DEMOGRAPHIC CHARACTERISTICS AND KNOWLEDGE ABOUT DANGER SIGNS IN PREGNANCY

AGE	KNOWLEDGE OF DANGER SIGNS			TOTAL	P VALUE
	Mentioned 0-4	Mentioned 5-9	other		
15-24 years	32(47.8%)	6(8.9%)	29(43.3%)	67(100%)	0.017
25-34 years	44(59.4)	5(6.8%)	25(33.8%)	74(100%)	
35-44 years	22(59.5%)	3(8.1%)	12(32.4%)	37(100%)	
45-49 years	0(0%)	3(37.5%)	5(62.5%)	8(100%)	
MARITAL STATUS					
Single	18(51.4%)	5(14.3%)	12(34.3%)	35(100%)	0.063
Married	78(56.1%)	10(7.2%)	51(36.7%)	139(100%)	
Widowed	2(40%)	0(0%)	3(60%)	5(100%)	
Separated	0(0%)	2(28.6%)	5(71.4%)	7(100%)	
EDUCATION LEVEL					
Primary/none	57(56.4%)	7(6.9%)	37(36.6%)	101(100%)	0.006
Secondary	36(48%)	6(8%)	33(44%)	75(100%)	
College	5(50%)	4(40%)	1(10%)	10(100%)	
OCCUPATION					
Housewife	48(56.5%)	4(.7%)	33(38.8%)	85(100%)	0.002
Formally employed	4(36.4%)	5(45.5%)	2(18.2%)	11(100%)	
Self employed	29(54.7%)	5(9.4%)	19(35.8%)	53(100%)	
Unemployed	17(45.7%)	3(8.1%)	17(45.9%)	37(100%)	
OWN MEDIA					
Yes	69(59.5%)	9(7.8%)	38(32.8%)	116(100%)	0.058
No	29(41.4%)	8(11.4%)	33(47.1%)	70(100%)	
PARITY					
No child	4(40%)	2(20%)	4(40%)	10(100%)	0.291
1-4 children	63(53%)	7(5.9%)	48(0.9%)	118(100%)	
Above 4 children	31(53.4%)	8(13.8%)	19(32.8%)	58(100%)	
TOTAL	98(52.7%)	17(9.1%)	71(38.2%)	186(100%)	

Table 19 shows associations between demographic characteristics of the respondents with their knowledge about danger signs in pregnancy. Three factors, age, occupation and level of education were significantly associated with knowledge about danger signs. Respondents who were aged 45-49 years had higher levels of knowledge about danger signs than the other age groups (37.5%, p value= 0.017). Respondents who had college education had higher levels of knowledge about danger signs than those with lower levels of education (40%, p value= 0.006). Respondents who were employed had higher levels of knowledge than those not employed (45.5%, p value =0.002).

TABLE 20: ASSOCIATIONS BETWEEN DEMOGRAPHIC CHARACTERISTICS AND PERCEPTION TOWARDS DANGER SIGNS IN PREGNANCY

	ACTION TO BE TAKEN IF DANGER SIGNS OCCUR			TOTAL	P VALUE
	Seek medical advice	Seek traditional healer's advice	Seek advice of older women		
AGE					
15-24 years	49(73.1%)	3(4.5%)	15(22.4%)	67(100%)	0.153
25-34 years	62(83.8%)	4(5.4%)	8(10.8%)	74(100%)	
35-44 years	28(75.7%)	1(2.7%)	8(21.6%)	37(100%)	
45-49 years	4(50%)	0(0%)	4(50%)	8(100%)	
MARITAL STATUS					
Single	22(62.9%)	4(11.4%)	9(25.7%)	35(100%)	0.009
Married	115(82.7%)	4(2.9%)	20(14.4%)	139(100%)	
Widowed	3(60%)	0(0%)	2(40%)	5(100%)	
Separated	3(42.9%)	0(0%)	4(57.1%)	7(100%)	
EDUCATION LEVEL					
Primary/none	77(76.2%)	5(4.9%)	19(18.8%)	101(100%)	0.966
Secondary	58(77.3%)	3(4%)	14(18.7%)	75(100%)	
College	8(80%)	0(0%)	2(20%)	10(100%)	
OCCUPATION					
Housewife	69(81.2%)	3(3.5%)	13(15.3%)	85(100%)	0.373
Formally employed	8(72.7%)	0(0%)	3(27.3%)	11(100%)	
Self employed	41(77.4%)	4(7.5%)	8(15.1%)	53(100%)	
Unemployed	25(67.6%)	1(2.7%)	11(29.7%)	37(100%)	
OWN MEDIA					
Yes	91(78.4%)	3(2.6%)	22(18.9%)	116(100%)	0.331
No	52(74.3%)	5(7.1%)	13(18.6%)	70(100%)	
PARITY					
No child	9(90%)	0(0%)	1(10%)	10(100%)	0.762
1-4 children	91(77.1%)	6(5.1%)	21(17.8%)	118(100%)	
Above 4 children	43(74.1%)	2(3.4%)	13(22.4%)	58(100%)	
TOTAL	143(76.9%)	8(4.3%)	35(18.8%)	186(100%)	

Table 20 shows associations between demographic characteristics and perception towards danger signs in pregnancy. There is a significant association between marital status and perception about danger signs in pregnancy (82.7%, p value= 0.009).

TABLE 21: ASSOCIATIONS BETWEEN SERVICE RELATED FACTORS AND KNOWLEDGE ABOUT DANGER SIGNS IN PREGNANCY

RECEIVED INFORMATION	DANGER SIGNS KNOWN			TOTAL	P VALUE
	Mentioned 0-4	Mentioned 5-9	other		
Yes	19(82.6%)	3(13.0%)	1(4.3%)	23(100%)	0.000
No	18(69.2%)	5(19.2%)	3(11.5%)	26(100%)	
Other	61(44.5%)	9(6.6%)	67(48.9%)	137(100%)	
TIME TAKEN TO REACH HEALTH CENTER					
Less than 1 hour	46(52.9%)	5(5.7%)	36(41.4%)	87(100%)	0.550
1-2 hours	34(51.5%)	9(10.3%)	23(34.8%)	66(100%)	
More than 2 hours	18(54.5%)	3(9.1%)	12(36.4%)	33(100%)	
ATTENDED ANC					
Yes	97(53.8%)	14(7.7%)	71(39%)	182(100%)	0.000
No	1(25%)	3(75%)	0(0%)	4(100%)	
NO. OF ANC VISITS					
1 visit	7(53.8%)	4(30.8%)	2(15.4%)	13(100%)	0.041
2 visits	7(46.7%)	1(6.7%)	7(46.7%)	15(100%)	
3 visits	32(56.1%)	4(7%)	21(36.8%)	57(100%)	
4 Visits	41(53.2%)	3(3.9%)	33(42.9%)	77(100%)	
5 and above visits	11(45.8%)	5(20.8%)	8(33.3%)	24(100%)	
TAUGHT DANGER SIGNS					
Yes	80(80.8%)	12(12.1%)	7(7.1%)	99(100%)	0.000
No	18(20.7%)	5(5.7%)	64(73.6%)	87(100%)	
UNDERSTOOD TOPIC					
Yes	67(78.8%)	11(12.9%)	7(8.2%)	85(100%)	0.000
No	13(92.9%)	1(7.1%)	0(0%)	14(100%)	
Other	18(20.7%)	5(5.7%)	64(73.6%)	87(100%)	
REASON FOR USING SAME HEALTH FACILITY					
Good services	47(60.1%)	7(8.9%)	24(30.8%)	78(100%)	0.366
Bad services	11(47.8%)	1(4.3%)	11(47.8%)	23(100%)	
Other	40(47.1%)	9(10.6%)	36(42.4%)	85(100%)	
TOTAL	98(52.7%)	17(9.1%)	71(38.2%)	186(100%)	

Table 21 above shows associations between service related factors and knowledge about danger signs in pregnancy. There are 5 significant associations. Those who experienced danger signs and were given information about them by health workers had more knowledge about danger signs than those who were not (82.6%, p value= 0.000). Those who attended antenatal care had more knowledge of danger signs than those who did not (53.8%, p value= 0.000). Respondents who had 3 antenatal visits and more had higher levels of knowledge than those with fewer visits (56.1%, p value=0.041). Respondents who were taught danger signs before had higher levels of knowledge than those who were not (12.1%, p value= 0.000). Those who understood the lesson also had higher levels of knowledge than those who did not (12.9%, p value =0.000)

TABLE 22: ASSOCIATIONS BETWEEN SERVICE RELATED FACTORS AND PERCEPTION ABOUT DANGER SIGNS IN PREGNANCY

RECEIVED INFORMATION	CAUSES FOR DANGER SIGNS			TOTAL	P VALUE
	Medical causes	Traditional causes	Other		
Yes	14(60.9%)	5(21.7%)	4(17.3%)	23(100%)	0.396
No	12(46.1%)	8(30.8%)	6(23.1%)	26(100%)	
Other	69(50.4%)	23(16.8%)	45(32.8%)	137(100%)	
TIME TAKEN TO REACH HEALTH CENTER					
Less than 1 hour	45(51.7%)	17(19.5%)	25(28.7%)	87(100%)	0.752
1-2 hours	36(54.5%)	11(16.7%)	19(28.8%)	66(100%)	
More than 2 hours	14(42.4%)	8(24.2%)	11(33.3%)	33(100%)	
NO. OF ANC VISITS					
1 visit	5(38.5%)	3(23.1%)	5(38.5%)	13(100%)	0.332
2 visits	10(66.7%)	3(20%)	2(13.3%)	15(100%)	
3 visits	27(47.4%)	9(15.8%)	21(36.8%)	57(100%)	
4 visits	41(53.2%)	13(16.8%)	13(16.9%)	77(100%)	
5 and above visits	12(50%)	8(33.3%)	4(16.7%)	24(100%)	
TAUGHT DANGER SIGNS					
Yes	57(57.6%)	23(23.2%)	19(19.2%)	99(100%)	0.002
No	38(43.6%)	13(14.9%)	36(41.3%)	87(100%)	
UNDERSTOOD TOPIC					
Yes	54(63.5%)	18(21.2%)	13(15.3%)	85(100%)	0.000
No	3(21.4%)	5(35.7%)	6(42.9%)	14(100%)	
Other	38(43.7%)	13(14.9%)	36(41.3%)	87(100%)	
REASON FOR USING SAME HEALTH FACILITY					
Good services	49(62.8%)	15(19.2%)	14(17.9%)	78(100%)	0.005
Bad services	11(47.8%)	8(34.8%)	4(17.4%)	23(100%)	
Other	35(41.2%)	13(15.3%)	37(43.5%)	85(100%)	
TOTAL	95	36	55	186(100%)	
	(51.1%)	(19.3%)	(29.6%)		

Table 22 shows associations between service related factors and perception towards danger signs in pregnancy. Respondents who had been taught danger signs had a positive perception towards danger signs in pregnancy (57.6%, p value =0.002). Those who understood the lesson also had positive perception towards danger signs (63.5%, p value= 0.000). Respondents who would use the same antenatal care facility because of good quality services had positive perception towards danger signs in pregnancy too (62.8%, p value= 0.005).

TABLE 23: ASSOCIATIONS BETWEEN SERVICE RELATED FACTORS AND PERCEPTION TOWARDS DANGER SIGNS IN PREGNANCY

RECEIVED INFORMATION	ACTION FOR DANGER SIGNS OCCURRING			TOTAL	P VALUE
	SEEK MEDICAL ADVICE	SEEK TRADITIONAL HEALERS' ADVICE	SEEK OLDER WOMEN'S ADVICE		
Yes	18(78.2%)	0(0%)	5(21.7%)	23(100%)	0.664
No	18(69.2%)	2(8.7%)	6(23.1%)	26(100%)	
other	107(78.1%)	6(4.4%)	24(17.5%)	137(100%)	
TIME TO REACH HEALTH CENTER					
Less than 1 hour	65(74.7%)	4(4.6%)	18(20.7%)	87(100%)	0.814
1-2 hours	54(81.8%)	2(3%)	10(15.2%)	66(100%)	
More than 2 hours	24(72.7%)	2(6.1%)	7(21.2%)	33(100%)	
ANC VISITS MADE					
1 visit	9(69.2%)	1(7.7%)	3(23.1%)	13(100%)	0.851
2 visits	13(86.7%)	0(0%)	2(13.3%)	15(100%)	
3 visits	43(75.4%)	3(3.9%)	11(19.3%)	57(100%)	
4 visits	62(80.5%)	3(3.9%)	12(15.6%)	77(100%)	
5 and above visits	16(66.7%)	1(25%)	7(29.2%)	24(100%)	
TAUGHT DANGER SIGNS					
Yes	78(78.8%)	4(4.1%)	17(17.2%)	99(100%)	0.803
No	65(74.7%)	4(4.6%)	18(20.7%)	87(100%)	
UNDERSTOOD YOPIC					
Yes	68(80%)	2(2.4%)	15(17.6%)	85(100%)	0.330
No	10(71.4%)	2(14.3%)	2(14.3%)	14(100%)	
other	65(74.4%)	4(4.6%)	18(20.7%)	87(100%)	
REASON FOR USING SAME ANC					
Good services	63(80.7%)	1(1.3%)	14(17.9%)	78(100%)	0.031
Bad services	13(56.5%)	1(4.3%)	9(39.1%)	23(100%)	
Other	67(78.8%)	6(7.1%)	12(14%)	85(100%)	
TOTAL	143(76.9%)	8(4.3%)	35(18.8%)	186(100%)	

Table 23 shows associations between service related factors and perception towards danger signs in pregnancy. Respondents who would use the same antenatal facility again because of good quality services had positive perception about danger signs in pregnancy (80.7%, p value= 0.031).

TABLE 24: ASSOCIATIONS BETWEEN CULTURAL BELIEFS AND PERCEPTION TOWARDS DANGER SIGNS IN PREGNANCY

CULTURAL BELIEFS HINDERING MEDICAL CARE	CAUSES FOR DANGER SIGNS			TOTAL	P VALUE
	Medical causes	Traditional causes	other		
Yes	8 (51.1%)	31(58.5%)	14(26.4%)	53(100%)	0.000
No	87(65.4%)	5(3.8%)	41(30.8%)	133(100%)	
TOTAL	95(51%)	36(19.4%)	55(29.6%)	186(100%)	

Table 23 shows significant association between cultural beliefs and perception towards danger signs. respondents who had no cultural beliefs that would hinder them from seeking medical care had positive perception towards danger signs while those with cultural beliefs had negative perception (58.5%, p value=0.000).

TABLE 25: ASSOCIATIONS BETWEEN CULTURAL BELIEFS AND PERCEPTION TOWARDS DANGER SIGNS IN PREGNANCY

CULTURAL BELIEFS HINDERING MEDICAL CARE	ACTION TO BE TAKEN IF DANGER SIGNS OCCUR			TOTAL	P VALUE
	Seek medical advice	Seek traditional healers' advice	Seek older women's advice		
Yes	16(30.2%)	6(11.3%)	31(58.4%)	53(100%)	0.000
No	127(95.5%)	2(1.5%)	4(3%)	133(100%)	
TOTAL	143(76.9%)	8(4.3%)	35(18.8%)	186(100%)	

Table 24 shows significant associations between cultural beliefs and perception towards danger signs in pregnancy. Respondents who had no cultural beliefs that would hinder them from seeking medical care had positive perceptions towards danger signs, while those who had cultural beliefs had negative perceptions (58.4%, p value=0.000).

4.4 FOCUS GROUP DISCUSSIONS

4.4.1 DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS

All the respondents were from Mapanza Rural Health Center catchment population in Choma District. The participants were divided into two groups which consisted of older women aged 31-49 years, and younger women aged 15-30 years. The groups comprised of 7 participants each.

The first group comprised younger women aged 15-30 years of age, who had been pregnant before. Five, of them were married and were Grade 7 dropouts. Two of them were secondary school pupils but were pregnant at the time of the study. They were all Christian and were not formally employed.

The second group comprised older women aged 31- 49 years who were all married. One of them had secondary education, while five of them had primary education. One of them had no formal education. All the respondents were Christian.

All the respondents were pregnant and were from the low socio-economic status group. From the two groups, 2 of the respondents had never given birth before, 3 of them had 1-4 children, while 9 of them had 5 children and above.

The major themes that were identified during data analysis were:-

- ❖ Knowledge about danger signs in pregnancy
- ❖ Reception by health personnel
- ❖ Cultural beliefs about danger signs in pregnancy
- ❖ Perception about danger signs in pregnancy

4.4.2 KNOWLEDGE ABOUT DANGER SIGNS IN PREGNANCY

The participants were asked to define danger signs in pregnancy in their own understanding and most of them were not able to give the correct definition. Some of the respondents said that danger signs in pregnancy means overworking, or delay in attending antenatal care for women who are HIV positive. Some of the responses given were as follows;-

Participant number 7 (age group 15-30 years) said, *“Danger signs in pregnancy means swelling of feet and draining of fluid from the birth canal”*.

Participant 3 said, *“It means overworking”*.

In the age group 31 years and above, most of the participants responded unanimously and said, *“danger signs in pregnancy means that the pregnancy is about to be aborted due to overworking”*. Participant 7 said, *“It means the HIV positive woman delayed in attending antenatal care, leading to illness in the mother and unborn baby.”*

The respondents were also asked to mention the danger signs they knew and both groups mentioned about 4 danger signs each. The danger signs mentioned were as follows:-

Vomiting- participant 5 a younger woman said, *“Vomiting”*, and also, *“coughing”*.

Another participant said, *“Abdominal pains”* and *“swelling of face”*.

Participant 3, a younger woman said, *“bleeding and draining”*, while participant 6 mentioned backache, epistaxis and malaria.

The other respondents agreed with the above answers that were given.

When asked whether any pregnant woman can develop danger signs in pregnancy, most of the participants from both groups said it was only certain women who were at risk of developing danger signs in pregnancy. This was evidenced by the following answers;-

“Not every pregnant woman can develop danger signs, but only those unlucky ones”.

Another participant in the older age group said it is only those women who do not listen to instructions who can develop danger signs.

Participant 4 in the younger age group said, *“There are only certain women who are at risk of developing danger signs in pregnancy”*. None of the respondents mentioned that every pregnant woman is at risk of developing danger signs in pregnancy.

When asked what the risk factors for developing pregnancy complications were, the following answers were given:-

Participant 6 in the younger age group said that women with multiple pregnancies were at risk of developing pregnancy complications. Another respondent mentioned the very poor and overworking women.

Participant 2 said *“The prostitutes”* were at risk of developing pregnancy complications. Participants in the older age group also mentioned prostitution, and grande multiparity, saying, *“the uterus becomes ‘lighter’ with multiple births (above 6)”*.

Another older woman said, *“Younger girls (below 15 years) have underdeveloped reproductive systems so they are more at risk of developing complications”*.

Participant 7 said, *“Women who take family planning pills are at risk of developing pregnancy complications because the pills make a lump in the uterus, cause draining and giving birth to a limp baby”*.

4.4.3 RECEPTION BY HEALTH PERSONNEL

Participants were asked whether they had attended antenatal care before and all of them said they had.

When asked how they were welcomed by the health workers at the health facility, 4 participants in the younger age group said the reception was good. Three of them said the reception was bad as the health workers fooled them and got annoyed at them, so they even feared to ask any questions.

One respondent in the younger age group said, *“They fool us and get annoyed with us”* and other respondents agreed with her.

Most of the older respondents said that the reception was good. They said they were taught lessons, investigated for diseases and given time to ask questions.

Two respondents from the older age group said, *“We are fooled and not given respect”*.

Respondents were asked how much time they spent individually with the health worker and they said it is very little time.

One respondent from the age group 15-30 years said, *“It is very little time”*.

Another one said, *“They just touch our abdomen briefly, listen to the baby, and off we go”*.

The older women equally said the time spent is very short, less than 3 minutes. One of them said,

“They do not examine us mothers, they do not greet us, and they do not give us time to ask individual questions”.

When asked whether they were taught about danger signs in pregnancy, all the younger women said they had never been taught. The older women said they had been taught, understood and given time to ask questions as a group.

4.4.4 TRADITIONAL/CULTURAL BELIEFS ABOUT DANGER SIGNS IN PREGNANCY

Respondents were asked about the traditional beliefs that they knew about danger signs in pregnancy. In response, most of the younger women said they were not sure.

One respondent from the younger women said;

“When there is threatened abortion (kuumuka), the danger signs will be seen”.

One older woman said that bleeding is due to witchcraft (*kalobola*), where a witch bewitches someone and they start bleeding.

Another respondent said;

‘Draining is caused by eating chicken feet, which will scratch the amniotic sac (nsuwa), causing draining’.

One respondent said, *“Bleeding occurs when the pregnancy is coming out and this is due to witchcraft.”*

Another respondent said, *“Excessive vomiting, backache and abdominal pains are caused by marital unfaithfulness by either spouse”*.

4.4.5 PERCEPTION ABOUT DANGER SIGNS IN PREGNANCY

Respondents were asked what they thought caused danger signs in pregnancy. The group of younger women said they had no idea.

One of the respondents replied, *"We do not know, no one has taught us about danger signs in pregnancy. Most of the lessons we learn are about AIDS"*. The other respondents shared the same sentiments.

Participant 4 in the age group 31 and above said, *"Danger signs are caused by overworking"*.

Others said they occur as a result of witchcraft, while others said they occur as a result of not following traditional advice, like not having extra marital affairs.

Asked what a woman who has developed danger signs should do, one of the younger women said, *"it is to come to the hospital"*, and the rest of the younger women agreed with her.

Among the older women, one of them said, *"medical advice should be sought"*.

Another participant said, *"asking from older women and they can even give herbs to treat the ailment"*. The others agreed with these 2.

Another respondent said, *"For danger signs that are due to witchcraft, help should be sought from witchdoctors"*.

4.4.6 SUGGESTIONS FOR IMPROVEMENT

All the participants felt that the topic of danger signs in pregnancy was a very important one, and that all women should have this knowledge. They felt that even women who were beyond the child-bearing age should know as they were the ones who usually advised younger women in the villages, and were usually consulted for pregnancy complications.

Participants suggested that health workers should intensify in teaching about danger signs in pregnancy so that all women got the message. Participants also suggested that Traditional Birth Attendants (TBAs) should be taught so that they could, in turn, teach women in the communities where they lived. The TBAs are consulted by women for pregnancy and delivery related advice.

CHAPTER FIVE

5.0 DISCUSSION OF FINDINGS

5.1 INTRODUCTION

The research question was, “could lack of knowledge and negative perception about danger signs in pregnancy be contributing to maternal mortality in Choma District”? The main objective of the study was to determine women’s knowledge and perception about danger signs in pregnancy and the factors that affect them in order to find possible solutions. The study subjects were women in the child-bearing age. Data were collected using interview schedules and a Focus Group Guide.

5.2 DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

The demographic characteristics are shown in Table 2.

Most of the respondents interviewed were in the age group 25-34 years (39.8%) and in the age group 15-24 years (36%). These were the eligible target population in the reproductive age group.

More than half (74.7%) of the respondents were married and only 18.8% of them were single. Only one respondent was divorced and she was classified as single. Most women in the study were married because Mapanza is predominantly rural, and it is traditionally and socially acceptable for any woman who becomes of age to marry and remain in that marriage. The other reason could be that most of the women had low education levels therefore marriage was a source of economic support.

All the respondents interviewed were Christian. This could be because Zambia is a Christian nation. Mapanza is predominantly Anglican maybe because the first missionaries to go to the area were Anglican and therefore most of the women interviewed belonged to the Anglican Church.

More than half (54.3%) of the respondents had low levels of education (no or primary education). The low levels of education could be because of early marriages which are still practiced in some rural areas (Gender in Development Division, 2002). A good number (40.3%) of the respondents had lower secondary education. This could be because many pupils could access Grades 8 and 9 education at Basic schools. Mapanza has 15 Basic Schools and one High School (Establishment Register for Ministry of Education, 2010).

Most (45.7%) of the respondents were housewives, with 28.5% running small-scale businesses. Only 5.9% were formally employed. A greater majority (92.5%) of respondents had low levels of monthly income (none or below K500, 000.00 per month). The explanation for this could be that most of the respondents had low levels of education and could therefore not secure good-paying jobs. Poverty and illiteracy levels are higher among women and this is in line with what is contained in the Gender in Development Division (GIDD, 2002).

More than half (62.4) of the respondents owned some form of electronic media. Electronic media is a good source of health information. However, this could only be helpful if women take time to listen to the programs that are run because they will be able to learn a lot of things through the media, including health education on topics like danger signs in pregnancy.

Majority (63.4%) of respondents had 1-4 children. A number (31.2%) had more than 5 children. The explanation could be that most of them are still planning to have more children, looking at the age groups mostly represented (15-34 years), who are still young women and sexually active. Mapanza is rural, with a lot of polygamous marriages where wives compete to bear children for their husbands. The other explanation could be that couples have started limiting their families owing to the Family Planning messages that are being taught. According to Choma District Maternal Health Report for 2009, the rate for new Family Planning acceptors in 2008 for Mapanza was 75.2 (Choma District Management Team, 2009).

5.3 KNOWLEDGE ABOUT DANGER SIGNS IN PREGNANCY

The research findings showed that 61.8% of the respondents had heard about danger signs in pregnancy. The commonest source of information (39.2%) was health personnel, probably because most of the women in the study attended ANC and could have heard about danger signs in pregnancy at the health center. Of the respondents who had heard about danger signs in pregnancy, 54.8 % of them could define danger signs in pregnancy correctly, while 7% could not. Most of the respondents (52.7%) had low levels of knowledge as they could only mention 0-4 danger signs. Low levels of knowledge were also found with Focus Group Discussion clients who were only able to mention 4 danger signs per group. Most of them were only able to mention 2 danger signs, with bleeding being the most commonly mentioned danger sign.

This finding agrees with the studies done in Pakistan by Hasan in 2001, and in Nepal (Mahato et al, 2008) which revealed that women had low levels of knowledge about danger signs in pregnancy. In the Gambia, similar results were found where women's awareness levels about danger signs were low. The low levels of knowledge could be attributed to a number of factors, like the low education level of respondents which could make the women less able to understand and remember what they were taught (Feldman-Jacobs, Olukoya & Avni, 2005).

Of the women who had heard about danger signs in pregnancy, 45.2% of them said that not every pregnant woman could develop danger signs in pregnancy, but only those who were unfortunate. This also came out during Focus Group Discussions where one respondent said, "*It is only the unlucky women who develop danger signs*". Only 16.7% of respondents said every pregnant woman is at risk of developing pregnancy danger signs. This could be because women did not really understand what danger signs in pregnancy were, and did not understand the seriousness of danger signs. However, 91.4% of the respondents said that it was important for every woman to have knowledge about danger signs in pregnancy, so that she could seek medical care on time if she experienced the danger signs.

Few (34.9%) of the respondents had experienced danger signs in pregnancy before, and out of these, 33.3% of the respondents were able to mention correct danger signs experienced. These results are similar to those found by Mahato et al in 2008 in Nepal where 35.1% of respondents who experienced danger signs in pregnancy and were counseled had correct knowledge about danger signs in pregnancy. Of the respondents who experienced danger signs, 26.3% of them sought medical care, while 7.5 % stayed home. Out of the respondents who sought medical care, 12.4% were given information and 12.9% were counseled about the danger signs they experienced, while 14% were not given any information. This shows the opportunities that are there to teach women about danger signs when they seek medical care.

This finding is similar to that found by the research conducted in Gambia by Anya, Hydera and Jaiteh in 2008 which revealed that opportunities to teach women were there because they attended health facilities.

The research also included a question on whether the women were aware of the risk factors for developing pregnancy complications. More than half of the respondents were able to mention 1-2 risk factors correctly, with older maternal age (above 35 years) and younger maternal age (below 15 years) being the risk factor that was commonly mentioned. Only 6.5% of the respondents were able to mention 3-4 risk factors correctly. This finding is similar to that found in Nepal by Thapa in 1993 where 39.4% of respondents did not know any risk factors for pregnancy complications. This study has revealed that knowledge of pregnancy risk factors was low among women. This could be because women were not taught about the danger signs, or due to illiteracy as most of the women could not read the pregnancy risk factors as outlined on the Zambian antenatal card.

5.4 SERVICE RELATED INFORMATION

Most (46.8%) of the respondents interviewed were able to reach the Health Center within an hour. A number of them (17.7%) took more than 2 hours to reach the health facility. Majority (82.8%) of the respondents travelled to the Health Center on foot,

15.6% used bicycles and only 1.1% hiked. These findings are similar to those found by Castro et al in Mexico in 2000 where it was found that most of the women died in pregnancy because of delays in seeking care. One of the causes of delay was lack of efficient transport to Health Centers. Obstetric emergencies were not quickly attended to because women were brought to the health centers late.

The majority (91.9%) of the respondents interviewed had been pregnant within the last 5 years prior to the study. A greater (98%) majority of respondents received antenatal care during their last pregnancy prior to the study, with 54.3% of them having attended 4 antenatal visits or more. A number of them (30.6%) had a total of 3 antenatal visits during their last pregnancy prior to the study. This could be because of the health education messages given to women on importance of having antenatal care and shows that the opportunity to teach women about health related topics is there because they attend clinics. This finding is similar to those found in the Gambia, where 90% of pregnant women attended antenatal care (Anya, Hydera & Jaiteh, 2008), and those found in Tanzania where 98% of the women attended antenatal care at least once (Pembe et al, 2009).

During antenatal care, majority (63.4%) of respondents spent less than 5 minutes individual time with health workers. This also came out during Focus Group Discussions where one respondent said, *'we spend very little time'*, and another one said, *'they only touch our abdomen briefly, listen to the baby, and off we go'*. Most of the respondents indicated that they were not given time to ask questions while alone with the health worker. They were not even examined thoroughly, as mothers. It is recommended in the WHO antenatal model that a full physical examination should be done on mothers during the antenatal visit (WHO, 2002). Most of the mothers said this was not done in Mapanza. This could be due to shortage of staff at the clinic (4 nurses against 5 establishment), and lack of midwives (Establishment register, 2009). Mapanza Health center has had no midwives for the past one and half years now.

Slightly above half (53.2%) of the respondents interviewed were taught about danger signs in pregnancy before. Out of these, 45.7% of them understood the lesson, while

7.5% of them did not understand. This is in line with respondents' source of information about the danger signs where most of them said they got the information from health workers. A good number (41.4%) of them were given time to ask questions.

The majority (85.5%) of the respondents would use the same antenatal facility if they became pregnant again, while 14.5% would not. Of those who would use the same facility again, 41.9% gave a reason that the health facility offered good quality services. However, 45.7% of the respondents said that they would use the same facility because they wanted to get an antenatal card, to follow hospital policy, and, because it was the nearest health center, giving them no option. The other respondents (12.4%) said that they would not use the same facility due to poor quality services.

5.5 PERCEPTION TOWARDS DANGER SIGNS

The majority (51.1%) of respondents believed that danger signs in pregnancy were due to medical causes, while 19.4% believed that they were due to traditional causes. Others (15.1%) believed that danger signs were caused by other things, like the world coming to an end, and witchcraft. A number (66.7%) of the respondents believed that danger signs could be prevented, and 51.1% believed that danger signs could be prevented by getting medical advice, while 5.4% believed that danger signs could be prevented by using herbs and consulting from witchdoctors.

If a woman developed danger signs in pregnancy, 76.9% of respondents believed that medical care should be sought, while 18.8% of them said care should be sought from older women. Others (4.3%) believed that help should be sought from traditional healers. Even if most women are realizing the importance of seeking medical care for danger signs, others still hold on to traditional beliefs which make them delay in seeking medical care.

This finding is similar to those found in Guinea Bissau which revealed that when women became sick, they tended to consult competing sectors of traditional and modern medicine (Dosterbaan & da Costa, 1995). The role of advice from older women in cases

of obstetric emergencies was also evident, hence the need to teach older women about danger signs in pregnancy too.

A study conducted by Thapa in 1993 in Nepal which involved teaching mothers-in-law the intra conception care of their daughters-in-law showed that the attitudes of mothers-in-law changed after they were taught and they developed positive perceptions. These findings showed the importance of teaching communities about danger signs in pregnancy so that they give right information to pregnant women who seek advice from them.

Some (28.5%) of the respondents had cultural beliefs that would hinder them from seeking medical care if they developed a pregnancy danger sign, while 71.5% had no cultural beliefs. The commonly mentioned cultural belief was that of marital unfaithfulness by either spouse which was mentioned by 18.3% of the respondents. They believed that marital unfaithfulness led to bleeding, vomiting, and abdominal pain. This is because there are a lot of myths and traditional concepts surrounding pregnancy and childbirth, and it is a good belief in preventing spread of HIV/AIDS which is mainly transmitted sexually. Such a belief would cause a delay in seeking medical advice when danger signs occurred. Bleeding in pregnancy was attributed to witchcraft by 7.5% of the respondents, which they called '*kalobola*' in vernacular. Other traditional beliefs mentioned were, '*eating fluidly diet and chicken feet*' which were believed to be a cause for draining, '*promiscuity, multiple pregnancy and pregnancy of a baby boy*' were believed to cause edema. These traditional concepts that surround pregnancy could be similar with those found in Guinea Bissau (Dosterbaan & da Costa, 1995) and could lead to consulting traditional medicine when danger signs in pregnancy occurred.

The study findings revealed a significant association between age and knowledge of danger signs in pregnancy (Table19). Respondents in the age group 45-49 years had higher levels of knowledge about danger signs in pregnancy (37.5%, p value=0.017), thereby rejecting the null hypothesis which states that there is no association between

age and knowledge about danger signs in pregnancy. This could be because older respondents had learnt the danger signs through their own or others' experiences.

This finding is similar to that found in Tanzania (Pembe et al, 2009) where it was found that the likelihood to know danger signs increased with age. Education level was also significantly associated with knowledge about danger signs (Table 19). More respondents with college education had higher levels of knowledge about danger signs in pregnancy (40 %, p value=0.006) than those with no/low education, thereby rejecting the null hypothesis which states that there is no association between level of education and knowledge about danger signs in pregnancy.

These findings are also similar to the same study done in Tanzania by Pembe and others in 2009 where it was also found that women with secondary education were 6 times more likely to know the danger signs compared to women with no education. Occupation had a significant association with knowledge of danger signs too (Table 19). Respondents who were employed had higher levels of knowledge than those not employed (45.5%, p value=0.002), thereby rejecting the null hypothesis which states that there is no association between occupation and knowledge about danger signs in pregnancy.

This finding is similar to findings in Nepal which revealed that 66.7% of women who were employed had higher levels of knowledge about danger signs, and also with what Feldman-Jacobs, Olukoya and Avni said in 2005, that women who have not played a role outside the home may be very uncomfortable in the public sphere, and may be unable to ask questions at clinics.

In this study, marital status was found to be significantly associated with perception towards danger signs in pregnancy (Table 20). Respondents who were married had a positive perception towards danger signs in pregnancy compared to those who were not (82.7 %, p value=0.009). This could be because married respondents get support from their husbands to attend antenatal care and they were taught together, hence they

reminded each other at home. Mapanza is involving the males in antenatal care and they have put measures in place to ensure that men attend with their wives.

A number of significant associations were found between service related factors and knowledge about danger signs in pregnancy (Table 21). Respondents who had experienced danger signs and were given information about them were able to mention more danger signs than those who were not (82.6%, p value=0.000).

Respondents who attended antenatal care were also able to mention more danger signs than those who did not (53.8%, p value=0.000), and those who had 3 visits or more had more knowledge about danger signs than those who had fewer visits (56.1%, p value=0.041). Respondents who were taught about danger signs, and those who understood the lesson had higher levels of knowledge about danger signs than those who were not taught and did not understand the lesson respectively (12.1%, p value=0.000, and 12.9%, p value=0.000 respectively).

These findings show significant associations, thereby rejecting the null hypothesis which states that there is no association between quality of services and knowledge about danger signs in pregnancy. The findings are similar to those found in Guatemala by Perreira and others in 1997 to 1999 which revealed that IEC strategies increased knowledge of danger signs in pregnancy. Similar results were also found in the Honduras (Vernom et al, 1993) where women's knowledge about warning signs in pregnancy increased significantly after they were taught. Another study in Nepal revealed that 76.7% of respondents had received counseling about danger signs experienced, and of these, 35.1% had correct knowledge about danger signs in pregnancy.

These findings showed the importance of IEC in informing women about danger signs in pregnancy, and showed that health workers at Mapanza are putting in effort to teach the women.

The study showed associations between service - related factors and perception towards danger signs in pregnancy (Table 22). Respondents who were taught about danger signs had positive perception towards them, than those who had never been taught (57.6%, p value= 0.002). Those who understood the lesson had positive perception compared to those who did not (63.5%, p value=0.000). There was a significant association between those who would use the same antenatal care facility if they became pregnant again, because of good quality services, and perception about danger signs. Those who would use the same facility had positive perception compared to those who would not (62.8%, p value=0.005).

These findings are significant, thereby rejecting the null hypothesis which states that there is no association between quality of services and perception towards danger signs in pregnancy.

There was also significant association between cultural beliefs and perception towards danger signs in pregnancy. Respondents who had no cultural beliefs that would hinder them from seeking medical care if they developed danger signs in pregnancy had positive perception towards them(95.5%) while those who had cultural beliefs that would hinder them from seeking medical care if they developed danger signs in pregnancy had negative perceptions towards them (58.4%, p value=0.000). The null hypothesis, which stated that there was no association between cultural beliefs and perception towards danger signs in pregnancy, was therefore rejected.

5.6 LIMITATIONS OF THE STUDY

The limitations for this study were that the study was only conducted in Choma Rural District and therefore results could not be generalized to other districts in Zambia.

The presence of interviewer may have affected respondents' responses and they may not have brought out the true facts about the topic. This was minimized by creating rapport with respondents and maintaining a non threatening attitude.

Respondents may also have failed to bring out their views in FGDs because some people are uncomfortable expressing their views or experiences in front of a group. This was minimized by assuring them of confidentiality and encouraging them to participate. There could have been recall bias for the participants who delivered a long time ago but this was minimized by probing.

5.7 IMPLICATIONS TO NURSING

5.7.1 Implications to nursing/midwifery practice

The study findings showed that most (61.8%) of the women in this study had heard about danger signs in pregnancy, and were able to define what danger signs in pregnancy mean. However, most (52.7%) of them had low levels of knowledge as most of them could only mention 1-2 danger signs. The study also found that the majority (97.8%) of women attended antenatal clinics and most of them attended four times in normal pregnancy. There is also a shift in the topics taught and mostly, clients are taught about HIV/AIDS, while other topics are almost neglected. There is therefore a need to strengthen IEC on all health topics by the nurse/midwife practitioners, at every opportunity, to empower women with more knowledge on danger signs in pregnancy so that they make informed decisions if they experience them.

5.7.2 Implications to nursing administration

The study revealed that women did not spend enough individual time with health workers. Most (63.4%) of them spent less than 5 minutes and did not usually have a physical examination during antenatal care. It was also found that Mapanza Rural Health Center had no midwife. There is a need to ensure that midwives are deployed to this center, by nurse administrators at district level, so that women's obstetric needs will be met by skilled providers. More support visits should also be made to the center to guide the staff on midwifery issues.

5.7.3 Implications to nursing education

As illustrated above, the study revealed that women longed to have physical examinations before doing abdominal examination and palpation, and also to spend

enough time with their midwives to ask questions. Nurse educators should instill this sense of responsibility, and the need to maintain high professional standards to midwifery students so that they are able to practice it and offer a total package of care to the women as they begin and continue their midwifery practice. Teaching women about danger signs in pregnancy and other relevant topics should be emphasized in the schools of midwifery so that women are empowered with knowledge in order to make informed and right decisions, especially in issues concerning danger signs in pregnancy.

5.7.4 Implications to nursing research

From the literature reviewed, it was found that few researches have been conducted in the area of danger signs in pregnancy, especially locally. It is therefore necessary for nurse researchers to conduct more studies in the area of women's' knowledge and perception about danger signs in pregnancy so that evidence based care will be given according to the findings.

5.8 CONCLUSION AND RECOMMENDATIONS

5.8.1 Conclusion

The study was conducted to determine women's knowledge and perception towards danger signs in pregnancy in order to find solutions.

The study revealed that 61.8% of the respondents had heard about danger signs in pregnancy and 54.8% were able to give a correct definition. However, most of the respondents had low levels of knowledge about pregnancy danger signs and could only mention 1-2 signs. This shows that the health workers are striving to teach women about danger signs in pregnancy. However, 45.2% of the respondents believed that it is not every pregnant woman who could develop pregnancy danger signs but only some, like those who are unlucky. This is not a good belief as some women will not be ready in the advent of developing pregnancy danger signs if they do not think that they are at risk of developing them. All pregnant women are at risk of developing pregnancy danger signs and should therefore be ready to handle any complication that arises at anytime.

Therefore, this should be made clear to the women and they should be taught complication preparedness too.

The study also revealed that of the respondents who experienced danger signs in pregnancy before, most (26.3%) of them sought medical care. Out of these, only 12.4% of them were counseled and given information about the danger signs experienced, while 14% were not. The study further revealed a significant association between being given information about danger signs experienced and knowledge of danger signs (p value=0.000). Therefore, there is need to counsel and teach women about the danger signs they experience so that they have more information about them.

The study revealed that 53.2% of the respondents had been taught about danger signs in pregnancy and out of these, 11.8% of them were not given time for questions. There is need therefore to give time for questions to women after teaching them so that they understand the lessons and apply them in their lives and in their communities.

Most (40%) respondents said they would use the same health facility for other reasons, not because services were good. This would imply that women were not happy with the services offered or the reception by health workers and so they would only go back there to get antenatal cards, which would ease their admission for delivery in a health facility. This could also mean that women were not truthful enough when they said they were given a good reception at the clinic and that they were taught, understood the lessons and were given time for questions. It is therefore imperative for health care workers to maintain positive relationships with their clients and make them feel at home at health facilities so that they are encouraged to freely express their concerns to health care workers.

The study further revealed that 18.8% of the respondents would seek the help of older women if they experienced danger signs in pregnancy. It is important to teach all women about danger signs in pregnancy so that all women, and not only those in the child-bearing age, are aware about them. This will help the older women, when they are

consulted for pregnancy danger signs, to be able to direct younger women to health centers.

The study revealed that a good number (28.5%) of respondents had cultural beliefs that would hinder them from seeking medical advice if they experienced danger signs in pregnancy. This calls for more teaching and awareness campaigns to discourage negative perception towards danger signs in pregnancy among women, so that they will not delay seeking medical care while they apply traditional remedies for danger signs experienced.

5.8.2 RECOMMENDATIONS

5.8.2.1 Recommendations for improving knowledge and perception about danger signs in pregnancy

1. The Ministry of Health needs to put in place measures to strengthen IEC programs in all Health facilities to increase knowledge about danger signs in pregnancy among women. This will also improve their perception.
2. There is a need for Ministry of Health to work with General Nursing Council to ensure that nursing and midwifery students graduate with the skills to teach women and communities about danger signs in pregnancy.
3. Ministry of Health should put measures in place to ensure that more midwives are trained and deployed equally to areas where they are needed to provide women and communities with the midwifery services they need.
4. Ministry of Health should continue working with other ministries, like Ministry of Education and non-governmental organizations to ensure that equal opportunities are accorded to girls to go to school. This will help them broaden their knowledge about danger signs in pregnancy and enable them to seek medical care on time if they experience them.
5. The Ministry of Health and District Health Offices need to keep on training community based volunteers, like Traditional Birth Attendants, in danger signs in pregnancy so that they can help teach women and communities where they live.

5.8.2.2 Recommendations for further research

1. Another study should be conducted in Choma Rural District on knowledge and perception of women towards danger signs in pregnancy, to cover a larger area. This study was only conducted in Mapanza.
2. A follow up study should be conducted in Choma Rural District to determine knowledge and perception of women toward danger signs in labor and in the post partum period in order to find out the source of the problem of high maternal mortality.
3. A further study should be conducted to explore women's practices for pregnancy and delivery complications in Choma Rural District.

5.9 DISSEMINATION AND UTILIZATION OF FINDINGS

A report of the research was written and submitted to Department of Nursing Sciences and University of Zambia library.

The findings were then presented to the faculty of Department of Nursing Sciences in the School of Medicine, University of Zambia (UNZA). Thereafter, results were presented to various stake holders involved in provision of Antenatal Care and teaching of danger signs in pregnancy at various foras, workshops and conferences. These included Ministry of Health and its' partners and Provincial Health Office for Southern Province.

Choma DHMT was given a report of the study results so that the district would use them to render evidence based care, as they provided ANC to the study site.

Money was sourced from Choma District Health Office research fund to organize a dissemination workshop which was attended by the District Commissioner, members from the District Development Committee and other cooperating partners. Staff members from Choma General Hospital, Macha Mission Hospital, and the health centers were also invited to hear the study results so that they would use the results to render evidence based care.

In addition, four copies of the research report were printed and submitted to the following;-

- Department of Nursing Sciences.
- University of Zambia Medical library and main library.
- Ministry of Health.
- Researcher.

REFERENCES

- Ahmed, Y. (1996). **Zambia Health Information Digest volume 3, NO 4. UNZA.** Lusaka. [<http://www.medguide.org.zm/zhid>. Accessed on 23rd June, 2009 at 16:00 hours GMT].
- Any, S. E, Hydera, A, & Jaiteh, L. E. S, (2008). **Antenatal Care in the Gambia. Missed opportunity for information, education and communication.** [<http://www.biomedcentral.com/1471-2393/8/9>]. Accessed on 19th February, 2009 at 21:00 hours GMT].
- Baker, P. N. (2006). **Obstetrics by ten teachers.** 18th edition. Hodder Arnold. London.
- Basavanthappa, B. T (1998). **Nursing Research.** Jaypee brothers Medical Publishers Ltd. New Delhi.
- Basavanthapa, B.T. (2007). **Nursing research.** 2nd edition. Jaypee brothers Medical Publishers Ltd. New Delhi.
- Burns, N. & Grove, S. K. (2009). **The Practice of Nursing Research. Appraisal, Synthesis and Generation of Evidence.** 6th edition. Saunders. St Louis. Missouri 63146.
- Castro, R., Campero, L., Hernandez, B. & Langer, A. (2000). Journal of Women's Health & Gender-Based Medicine. Volume9 no.6. **A Study on Maternal Mortality in Mexico through a qualitative Approach.** Mary Ann Liebert.
- CBoH. (2002). **Integrated Guidelines for Frontline Health Workers.** 2nd edition. Government printers. Lusaka.
- Choma DHMT. (2005). **Action Plan and Budget 2006-2008.**
- CSO. (2006). **Zambia Health and Demographic Survey.** [<http://www.en.afrik.com/article13877.html>]. Accessed on 3rd May, 2009 at 22:20 hours GMT].

CSO, MoH, TDRG, UNZA & Macro International Inc. (2007). **Zambia Demographic and Health Survey 2007**. Calverton, Maryland, USA: CSO & Macro International Inc.

Davidson, M. R, Ladewig, P.A. W, & London, M. L. (2008). **Clinical Handbook for Old's Maternal-Newborn Nursing and Women's Health across the Lifespan**. 8th edition. Pearson Education Inc., Upper Saddle River, New Jersey 07458.

Dempsey, P. A. & Dempsey, A. D. (2000). **Using Nursing Research Process. Critical evaluation and utilization**. Lippincott. Philadelphia.

Feldman-Jacobs, Olukoya, & Avni, (2005). **A summary of the "so what" report. A look at whether Integrating a Gender Focus into Programs makes a Difference to Outcomes**. WHO.

Forstenzer, H. (2006) **Skilled Care Initiative: Patterns in seeking Skilled Care at Delivery. Household Survey Findings from Burkina Faso, Kenya, and Tanzania**. [[http://www.sci-patts-overview\[1\]](http://www.sci-patts-overview[1])]. Accessed on 5th June, 2009 at 11:01 hours GMT].

Fraser, D. M. & Cooper, M. A. (2003). **Myles Textbook for Midwives**. 14th Edition. Churchill Livingstone. Edinburgh.

GIDD. (2000). **National Gender Policy**. Cabinet Office. Lusaka.

GIDD. (2002). **Strategic Plan of Action for the National Gender Policy (2004-2008)**. Cabinet Office. Lusaka.

Hasan, I. J. (2001). Population Association of Pakistan. **Women's Perceptions Regarding Obstetric Complications in a poor fishing community in Karachi**. [<http://www.ponline.org/docs/168680>]. Accessed on 23rd June, 2009 AT 20:00 hours GMT].

Kanyama, R., Mumba, A. & Rietsman, A. (1996). **Safe Motherhood. A report on FGD and interviews in Kaputa's communities**. Kaputa District Health Services, Kaputa. [<http://www.medguide.org.zm>]. accessed on 23rd June, 2009 at 16:00hours GMT].

Khanum, P. A., Quaiyum M., A., Islam, A., Ahmed, S. (2000). ***Complications of pregnancy and Childbirth: Knowledge & Practices of women in rural Bangladesh*** [<http://www.icddr.org>. accessed on 8th June, 2009 at 19:30hours GMT].

Lerberghe, W. V. (2005). ***The World Health Report***. WHO. [<http://www.globalhealth.org/news/article/9240>. Accessed on 17th April, 2009 at 14:00 hours GMT].

Lirri, E. (2008). ***Female Genital Cutting Education and Networking Projects***. [<http://www.fgmnet.org/gonews.php>. Accessed on 31st May, 2009 at 23:20 hours GMT]

Mahato, R K., Lahiry, S., Yasmin, N., Shahjahan, M., Ahmad, T., (2008). Subjournal of Public Health volume 1 NO 2. ***Awareness Level on 5 Danger Signs in pregnancy among married women of selected village Development Committees of Nepal.*** [<http://www.subhd.net/journal/JPH/SUB-JPHO2>.. Accessed on 6th May, 2009 at 11:50 hours GMT].

Matsuyama, A. & Moji, K. (2008). ***Perception of bleeding as a danger sign during pregnancy, delivery & the post partum period in rural Nepal.*** Qualitative Health Research. Volume18no2. [<http://www.qhr.sagepub.com/cgi/content/abstract>. Accessed on 6th May, 2009 at 12:00 hours GMT].

Mera Medical Education Resource Africa (2008). ***Towards “health workers for all:”The Global Health Workforce Alliance.***

Mpembeni, R. N. M., Killewo, J. Z., Leshabari, M. T., Massawe, A. J.,Mushi, D. & Mwakipa, H.(2007). ***Use Pattern of Matrenal Health Services & determinants of Skilled Care during delivery in Southern Tanzania: Implications for achieving MDG-5 targets***[<http://www.biomedcentral.com/1471-2393-7-29>. Accessed on 19th June, 2009 at 13:20 hours GMT].

MoH. (2005). ***Pregnancy, Childbirth, Postpartum and Newborn care Guidelines.***
MoH.

MoH. (2005). **National Health Strategic Plan 2006-2010. 'Towards attainment of millennium development goals and national health priorities..'** MoH. Lusaka.

MoH .(2009). **To bring health information as close to the people as possible. Quarterly issue number 2.** MoH. Lusaka.

Netherlands School of Public and Occupational Health (2007). **Reproductive and Sexual Health and Safe Motherhood research in Eastern Europe and Central Asia.** [http://www.nspoh.nl/page.ocl? Accessed on 8th June, 2009 at 20:00 hours GMT].

Novak, J. C. & Broom, B. L. (1999). **Maternal and Child Health Nursing.** 9th edition. Mosby. Missouri 63146.

Oescher, J. (2006). **Introduction to Quantitative Research Revised.** [http://www.ed.uno.edu/.../outline6.html. Accessed on 29th May, 2009 at 20:50 hours GMT].

Pembe, A. B., Urassa, D.P, Carlstedt, A, Lindmark, G, Nystrom, Darj, E. (2009). **Rural Tanzania Womens' Awareness of Danger Signs of Obstetric Complications.** [<http://www.biomedcentral.com/1471-2393/9/12>]. Accessed on 5th May, 2009 at 12:55 hours GMT].

Perreira K. M., Bailey, P. E., de Bocalette, E., Hurtado, E., deVillagrans, S. R., Matute, J. (2004). Maternal & Child Health journal volume 6 no1. **Increasing Awareness of Danger Signs in Pregnancy through Community-based & Clinic-based education in Guatemala** [http://www.springerlink.com/content. Accessed on 6th May, 2009 at 11:00hours GMT].

Polit, D. F.& Hungler, B. P. (1995). **Nursing Research. Principles and methods.** 5th edition. JB Lippincott. Philadelphia.

Polit, D. F. & Hungler, .B. P. (1999). **Nursing Research. Principles and Methods.** 6th edition. Lippincott Williams and Wilkins. Philadelphia 19106.

Polit, D. F., Beck, C. T. & Hungler, B.P. (2001). **Essentials of Nursing Research. Methods, Appraisal and Utilization.** 5th edition. Lippincott Williams and Wilkins. Philadelphia, PA19106.

Public Service Management Division (2010). **Establishment Register for Ministry of Education Southern Province Support Estimates of Expenditure for the Year 2010**. Vol. 29. Government Printers. Lusaka.

Royston, E & Armstrong, S. (1989). **Preventing Maternal Deaths**. WHO. Geneva.

Southern Province HMIS report, 2008.

UNICEF (2009). **Maternal and Newborn Health**. [http:// www.unicef.org/.../media-10370.html. Accessed on 3rd May, 2009 at 23:30 hours GMT].

Thapa, M. (1993). **Safe Motherhood Initiative: A study on the knowledge and attitudes of mothers-in-law regarding the intra conceptional care of their daughters-in-law**. In: Population Dynamics in Nepal & related issues of sustainable development. Volume 2. Central Department of Population Studies [http://www.popline.org/docs/1079/093377.html. Accessed on 6th May, 2009 at 14:00hours GMT].

Uys, H. H. M. & Basson, A. A. (2000). **Research Methodology in Nursing**. Kagiso Tertiary. Cape Town.

Vernon, R., Lopez C. J. R., Carcamo, J. A., & Galindo, J. (1993). **The Impact of Perinatal Reproductive Health Programs in Honduras**. [http://www.hubley.co.uk/safemotherhood.htm.childbirth/safemotherhood].

Wehmeier, S. (2000). **Oxford Advanced Learner's Dictionary**. 6th edition. Oxford University Press. Oxford.

WHO. (2002). **WHO Randomized trial: Manual for the Implementation of the New Model**. WHO. Geneva.

WHO. (2005). **Maternal Deaths**. [http:// www.who.int/.../index.html. Accessed on 2nd May, 2009 at 21:00 hours GMT].

APPENDICES

APPENDIX I

PARTICIPANT INFORMATION SHEET

Introduction

I, **Nambala Brenda Sianchapa**, a student pursuing a Master of Science in Nursing Degree at the University of Zambia, am kindly asking for your participation in the above named study. I will explain to you the purpose of the study, the risks and benefits and what I expect of you before you decide to participate. If you decide not to participate, no privileges will be taken away from you. If you are willing to participate, I will ask you to sign a consent form to allow me to interview you. Your participation in the study will not result in any immediate benefits to you.

Purpose of the study

The purpose of the study is to determine knowledge and perception of women about danger signs of pregnancy in Choma rural district. The information generated will assist policy makers and implementers of Antenatal Care programs to re direct policy and program implementation and offer better services which will meet the needs of the people.

Procedure

The study involves a face to face interview with the staff that will ask you a set of questions using an interview schedule. After you have signed the consent form, the staff will go ahead and ask you questions and your responses will be recorded on the interview schedule. The interview will take about 20 to 30 minutes to complete.

Risks and discomforts

Your time will be utilized to answer the questions and no risk is involved in the study. Some questions may seem sensitive and personal. Care will be taken not to embarrass you.

Benefits

There is no direct benefit to you by participating in this study. However, the information that will be obtained will help policy makers to make policies that will ensure that you and other women will be attended to in a way that will meet their individual needs to benefit from Antenatal Care programs. No monetary favors will be given in exchange for the information given, but your questions will be answered and information will be given on danger signs in pregnancy.

Confidentiality

Your research records and any information you will give will be confidential to the extent permitted by law. You will be identified by a number, and personal information will not be released without your written permission, except where required by law. The University of Zambia Research Ethics Committee or the School of Medicine, and the Ministry of Health may receive your records, but this will be done with confidentiality.

ZIKUMBATIZYO

CIKUMBATIZYO CITAANZI

CIPEPA CIJISI TWAAMBO TWAZITOLA LUBAZU

Bupanduluzi

Mebo, nde **Nambala Brenda Sianchapa**, ndili sicikolo wiiya busilisi busumpukide bwa digilii a cikolo cipati camu Zambia (UNZA), ndilomba kutola lubazu kwanu mulwiiyo lwaambwa atala aawa. Ndila mupandulwida muzeezo mupati walwiiyo naa buvuntauzyi, ntenda a bubotu alimwi aceeco ncomweelede kucita kamutana kutola lubazu, naa mwasala kutola lubazu. Naa mwasala kutatola lubazu, kwiina ncomunga mwasweekelwa. Kuti naa mwalyaaba kutola lubazu, inga ndamulomba kuti mulembe cizuminano cinga cilandizumizya kumubuzya mibuzyo. Kutola lubazu kwanu mukuvuntauzya ooku kwiina bubotu mbomunga mwajana cakufwambaana.

Muzeezo wabuvuntauzyi

Muzeezo mupati wabuvuntauzyi oobu ngwakuyanda kuzyiba naa bamakaintu balijisi luziyibo akuzyiba miyeeyo yabo kujatikizya zitondezyo zyantenda kumukaintu uuli bubi mu bboma Iya Choma nkolili muminzi. Twaambo toonse tuyoozwa mukuvuntauzya ooku tuyoogwasya basikubamba twaambo tujatikizya kupimwa kwabasimada, kuti bubelesi boonse bukabe kabotu akusika kumbaakani iyanda bantu.

Machililanwa

Mubuvuntauzyi boonse kuyooba ciindi cakubuzyigwa mibuzyo mulomo mpande mwaakumana kusimba cipepa cacizuminano. Bwiinguzi bwanu buyoolebwa mupepa Iyamibuzyo. Kubuzyigwa ooku kuyootola ciindi cifwaafwi tuwvalu-vwalu tuli makumi obile kusikila kucisela cawoola.

Ntenda akutalimvwa kabotu

Ciindi canu tuyoocibelesya kuvwuwa mibuzyo, mpoona kwiina ntenda iliwo mukuvwuntauzya ooku. Mibuzyo imwi inooli yacigaminina pele tuyoosola kuti mutakafwi nsoni.

Bubotu

Kwiina bubotu bwacigaminina buzwa mukuvwuntauzya ooku. Nokuba boobo, twaambo tuti kapegwe tuyoowasya basikubamba makani aanseba kuti bakabambe bweendelezi buti ndinywe abamakaintu bamwi kuciindi cakulangwa mada. Kwiina mali ayooppegwa mubuvwuntauzi oobu, pele tuyooringula mibuzyo yanu kujatikizya zitondezyo zyantenda ciindi mukaintu nali aada.

Maseseke

Twaambo toonse tujatikizya buvwuntauzyi atwaambo toonse tutipegwe kuciindi eeci ntwamaseseske cita kuti mulawo wazumizya kucita oobo. Muyooppegwa buyo namba yalo inooli cizyibyoy canu. Zyoonse zijatikizya ndinywe kwiina noziyoozyibwa akupegwa kumuntu uumbi shita kuti mwazumizya kwiinda mukulemba. Cibeela ceendelezya zyamaseseke, abweende bubotu bwazintu, naa cikolo camisamu, alimwi amutabi wa nseba wa mfulumende inga watambula twaambo twanu pele zyoonse ziyooocitwa cakusisa.

INFORMED CONSENT FORM

The study has been explained to me and I understand the purpose, the benefits, the risks and discomforts and the confidentiality of the study. I further understand that:

If I agree to take part in this study, I can withdraw at any time without having to give an explanation and that taking part in this study is purely voluntary.

I,,

(Names)

agree to take part in this study.

Signed:..... Date:..... (Participant)

(Participant’s signature or thumb print)

Signed:..... Date: (witness)

Signed:..... Date:.....

(Researcher)

PERSONS TO CONSULT FOR QUESTIONS OR PROBLEMS

1. Nambala Brenda Sianchapa, University of Zambia, School of Medicine, Department of Nursing Sciences, P. O. Box 50110, Lusaka. Cell phone number: 0979187399/0955812823.email: brendanambala@yahoo.com.
2. The Head of Department, University of Zambia, School of Medicine, Department of Nursing Sciences, P. O. Box 50110, Lusaka. Telephone number 0211252453.
3. The Chairperson, University of Zambia, Research Ethics Committee, P. O. Box 50110. Lusaka.

IPEPA LYACIZUMINANO

Buwwuntauzyi boonse bwapandululwa kulindime alimwi ndaswiililisa muzeezo, bubotu, ntenda akutalimvwa kabotu kubikilizya amaseseke ajatikizya buwwuntauzyi. Ndajana alimwi luzyibo lwakuti naa ndazumina kutola lubazu mukuvwuntauzya ooku, inga ndaleka akatikati kakunyina kupa twaambo. Alimwi ndazyiba kuti kutola lubazu mubuwuntauzyi oobu ncakulyaaba buya.

Mebo nde (Names)

ndazumina kutola lubazu mukuvwuntauzya ooku.

Kusimba..... Buzuba bwamwezi.....

Kusimba..... Buzuba bwamwezi.....
(kamboni)

Kusimba..... Buzuba bwamwezi.....
(sikuvwuntauzya)

Naa mujisi mibuzyo nokuba makatazyo, amulembele kuli;-

1. Nambala Brenda Sianchapa, University of Zambia, School of Medicine, Department of Nursing Sciences, P. O. Box 50110, Lusaka. Cell phone number- 0979 187 399 or 0955 812 823. E-mail; brendanambala@yahoo.com.
2. The Head of Department, UNZA, School of Medicine, Department of Nursing Sciences, P.O. Box 50110, Lusaka. Telephone number 021 1252453.
3. The Chairperson, Biomedical Research Ethics Committee, University of Zambia, School of Medicine, P.O. Box 50110, Lusaka.

APPENDIX II

BUDGET

BUDGET CATEGORY	UNIT COST (ZMK)	QUANTITY	TOTAL (ZMK)
Stationery			
1. Bond paper	30,000.00	10 reams	300,000.00
2. Pens	1,000.00	10 pens	10,000.00
3. Pencils	1,000.00	10 pencils	10,000.00
4. Rubbers	1,000.00	5 rubbers	5,000.00
5. Note books	10,000.00	3 notebooks	30,000.00
6. Correction fluid	15,000.00	3 bottles	45,000.00
7. Stapler	30,000.00	3	90,000.00
8. Staples	10,000.00	3 boxes	30,000.00
9. Carrying bags	100,000.00	3	300,000.00
10. Scientific calculator	100,000.00	1	100,000.00
11. Printer toner	1,000,000.00	2	2,000,000.00
12. Flash disc	200,000.00	1	200,000.00
13. Laptop	8,000,000.00	1	8,000,000.00
14. Tape recorder	400,000.00	1	400,000.00
15. CDs for transcribing	50,000.00	2	100,000.00
16. Tape recorder cassettes	20,000.00	3	60,000.00
17. Printer	500,000.00	1	500,000.00
subtotal			12,180,000.00
Personnel			
Lunch allowance			
1. Driver.	50,000.00	x1x30 days	1,500,000.00
2. Research assistants	50,000.00	x2x30 days	3,000,000.00
3. Principal investigator	50,000.00	x1x30 days	1,500,000.00
4. Training research assistants			
• Biscuits and drinks	12,000.00	3x5 days	180,000.00
• Lunch allowance	50,000.00	3x5 days	750,000.00
subtotal			6,930,000.00
Transport			
Fuel (diesel)	7,000.00/liter	x l for 12 trips of 90km each	2,520,000.00
Researcher's transport to and from	110,000.00	1x12 trips	1,320,000.00

UNZA			
subtotal			3,840,000.00
Services			
1. Ethics committee	250,000.00	1	250,000.00
2. Photocopying proposal	300.00	10x50 pages	150,000.00
3. Photocopying questionnaire	300.00	250x10 pages	750,000.00
4. Formatting proposal and report	60,000.00	2	120,000.00
5. Translating questions and consent form	200,000.00	1	200,000.00
	50,000.00	2	100,000.00
6. Software packages	600,000.00	1	600,000.00
7. Data entry	1,000,000.00	1	1,000,000.00
8. Data analysis	300.00	5x200 pages	300,000.00
9. Photocopying report			
10. Binding	20,000.00	5	100,000.00
a. Research proposals	250,000.00	5	1,250,000.00
b. Research reports			
Subtotal			7,520,000.00
Drinks and biscuits for FGD participants	12,000.00	24	288,000.00
Transport refund for FGD participants	30,000.00	14	420,000.00
Subtotal			708,000.00
TOTAL			31,278,000.00
CONTINGENCY 10%			3,127,800.00
GRAND TOTAL			34,405,800.00

BUDGET JUSTIFICATION

1. STATIONERY

Stationary is required to type the research proposal, the questionnaires, the research report and for printing the documents.

Staples and staplers are required for keeping papers properly arranged all the time. Pens and pencils are needed for taking notes through out the research project. Bags are needed for carrying questionnaires around during data collection. The flash disk is needed to keep soft copies of the research proposal and report. The scientific calculator is needed for making calculations during data analysis.

2. PERSONNEL EMOLUMENTS

Funds will be needed for buying lunch during data collection for the researcher, assistants and the driver.

3. SERVICES

Services will be needed to format and bind the research proposal and report, and also to help with data entry and analysis.

The research ethics handling fee is a requirement of the research ethics committee which approves the study.

4. TRANSPORT

Fuel will be needed to take researcher and assistants to the data collection sites.

CONTINGENCY FEE

This is an additional 10% of the total budget to cater for unforeseen expenses during the study.

APPENDIX III: GHANNT CHART SHOWING VARIOUS TASKS TO BE UNDERTAKEN AND THE TIME FRAME (FROM APRIL, 2009 TO MARCH, 2010)

Year/month		2009									2010		
		april	may	june	july	august	september	october	november	December	january	february	march
Task to be performed	Responsible person												
Literature review	researcher												
Finalize proposal	researcher												
Clearance from school of medicine and ethics committee	researcher												
Training research assistants/pilot	researcher												
Data collection	Researcher/research assistants												
Data analysis	Researcher/statistician												
Report writing	Researcher												
Submission of draft report	Researcher												
Finalization of report	Researcher												
Dissemination of results	Researcher												
Monitoring and evaluation	Researcher												

APPENDIX IV
THE UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
DEPARTMENT OF NURSING SCIENCES

**Interview schedule on knowledge and perception of women towards danger signs
in pregnancy in Choma rural district**

Date of interview: _____

Place of interview: _____

Name of interviewer: _____

Serial number: _____

INSTRUCTIONS FOR THE INTERVIEWER

1. Introduce yourself to the respondent
2. Ensure that the respondent is eligible for the interview and can be included in the study.
3. Explain the purpose of the study and assure respondent of confidentiality
4. Request respondent for a written consent before you start the interview.
5. Do not write name of respondent on interview schedule.
6. Ensure that you get a response for each question.
7. Circle the most appropriate response, or write answer on space provided.
8. Provide time for respondent to ask questions at the end of the interview.
9. Thank the respondent at the end of the interview.

SECTION A: DEMOGRAPHIC DATA

1. What was your age at your last birthday?

- 1. 15-24 years
- 2. 25-34 years
- 3. 35-44 years
- 4. 45-49 years

2. What is your marital status?

- 1. Single
- 2. Married
- 3. Divorced
- 4. Separated
- 5. Widowed

3. What is your religion?

- 1. Christian
- 2. Moslem
- 3. Hindu
- 4. Buddhist
- 5. Other (specify)

4. What is your educational level?

- 1. None
- 2. Primary
- 3. Secondary
- 4. College
- 5. University

5. What is your occupation?

- 1. Housewife
- 2. Formally employed
- 3. Self-employed
- 4. Unemployed

6. What is your income?

- 1. Below ZMK500, 000 per month

- 2. Between ZMK500, 000 and ZMK 1,000,000 per month
- 3. Above ZMK1, 000,000 per month
- 4. None
- 7. Do you own any electronic communication media?
 - 1. Yes
 - 2. No
- 8. How many children do you have?
 - 1. No child
 - 2. 1-4 children
 - 3. 5 children and above

SECTION B: KNOWLEDGE ABOUT DANGER SIGNS IN PREGNANCY

- 9. Have you ever heard of “danger signs in pregnancy”?
 - 1. Yes
 - 2. No (skip to question 14)
- 10. If yes, what is the meaning of “danger signs in pregnancy”?
 - 1. Signs that indicate that the pregnant woman or/and the pregnancy has an ailment manifested by such abnormal signs like bleeding, severe headache etc
 - 2. Other (specify)
 - 3. Don't know
- 11. What is the source of your information about danger signs in pregnancy?
 - 1. Health personnel
 - 2. Relatives
 - 3. Friends
 - 4. Media
 - 5. Other (specify)
- 12. Can any pregnant woman develop danger signs in pregnancy?
 - 1. Yes
 - 2. No
 - 3. Don't know
- 13. Name the danger signs in pregnancy that you know (circle all mentioned)

- 1. Bleeding at any time in pregnancy
- 2. Leaking of fluid from birth canal
- 3. Swelling of the body
- 4. Persistent vomiting especially from 4th month of pregnancy onwards
- 5. Persistent headache or blurred vision
- 6. Fever
- 7. Absent or decreased fetal movements in the last 3 months of pregnancy
- 8. Foul smelling vaginal discharge
- 9. Feeling very tired
- 10. Unusual abdominal pain
- 11. Pain /burning on urination
- 12. Persistent backache

14. In your opinion, is it important for women to know the danger signs in pregnancy?

- 1. Yes
- 2. No
- 3. Don't know

15. Give reasons for your answer to question 14

- 1. Yes, because they will seek medical care on time
- 2. No because the danger signs will go away on their own
- 3. Other (specify).....

16. Have you ever experienced any danger sign in pregnancy?

- 1. Yes
- 2. No

17. What danger sign/signs have you experienced?

.....

.....

.....

.....

18. What did you do when you experienced the danger sign/signs in pregnancy?

- 1. Sought medical care
- 2. Sought care from a traditional healer
- 3. Stayed home
- 4. Sought care from an older woman (if answer is 2, 3, or 4, skip to question 21)

19. Were you given information about the danger sign/s you experienced at the clinic?

- 1. Yes
- 2. No (skip to question 21)

20. If yes, what information were you given?

- 1. Danger sign was explained and counseling was done on what to do about it
- 2. Other (specify)

21. What are the risk factors for developing pregnancy complications that you know?

- 1. Older age (35 years and above) or young mother's age (below 20)
- 2. Genetic predisposition
- 3. Pre existing medical condition
- 4. Other (specify)
- 5. Don't know

SECTION C: SERVICE RELATED INFORMATION

22. How much time do you take to reach the nearest health center?

- 1. Less than one hour
- 2. More than one hour (specify the time)

23. What means of transport do you use to go to the health center?

- 1. On foot
- 2. Cycling
- 3. Ox-cart
- 4. Hiking

24. When was the last time you were pregnant?

- 1. 1-5 years ago
- 2. 6-10 years ago

3. More than 10 years ago

25. Did you receive antenatal care during your last pregnancy?

1. Yes

2. No (skip to question 28)

26. How many antenatal visits did you make during your last pregnancy?

1. One visit

2. Two visits

3. Three visits

4. Four visits

5. More than four visits (give reasons)

.....

27. How much time did you spend with the health care provider?

1. Less than 5 minutes

2. 5-10 minutes

3. 11-20 minutes

4. 21-30minutes

5. 31-40 minutes

28. Have you ever been taught about danger signs in pregnancy at the health center?

1. Yes

2. No (skip to question 31)

29. If yes, did you understand what you were taught?

1. Yes

2. No

30. Were you given time to ask questions?

1. Yes

2. No

31. If you became pregnant again, would you attend antenatal care at the same health center?

1. Yes

2. No

32. Give reasons for your answer to question 31 above

1. Yes because quality of services is very good

2. No because quality of services is poor

3. Other (specify)

SECTION D: PERCEPTIONS ABOUT DANGER SIGNS IN PREGNANCY

33. In your opinion, what causes the danger signs in pregnancy?

1. Medical causes

2. Traditional causes

3. Other (specify)

34. In your opinion, can a pregnant woman prevent danger signs in pregnancy?

1. Yes

2. No (skip to question 36)

3. Other (skip to question 36)

35. If yes, how can danger signs in pregnancy be prevented? (Please explain)

.....

.....

36. In your opinion, what should a pregnant woman who develops danger signs in pregnancy do?

1. Seek medical advice

2. Seek help from a traditional healer

3. Seek help from other older women

4. Other (specify)

37. Do you have any cultural/traditional beliefs about danger signs in pregnancy that would hinder you from seeking medical care if you developed a danger sign in pregnancy?

1. Yes

2. No

38. What are the cultural/traditional beliefs about danger signs in pregnancy that you know?

.....
.....
.....



We have come to the end of our interview and I thank you for your participation

CAKUKUMBATIZYA CANE
THE UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
DEPARTMENT OF NURSING SCIENCES

Mibuzyo ijatikizya luzyibo amizeezo yabamakaintu kweendelanya zitondezyo zyantenda kumukaintu uuli bubi mubboma lya choma nkolili muminzi

Buzuba bwakubuziyigwa:.....

Busena bwakubuziyigwa:.....

Izyina lyasikubuzya:.....

Inamba yako:.....

MALAILILE A SIKUBUZYA

1. Kolipandulula kuli sikubuziyigwa
2. Tola masimpe kuti sikubuziyigwa uleelede kubuziyigwa alimwi naa ulakonzya kusanga mubuvwuntauzyi.
3. Pandulula muzeezo wabuvwuntauzyi alimwi syomezya maseseke
4. Kumbila kuti sikuvwiila mibuzyo asimbe pepa lyacizuminano
5. Utalembi izyina lya sikwiingula acipepa camibuzyo
6. Bona masimpe kuti ujane muzeezo kumubuzyo uli oonse
7. Kweenga kazinguluzingulu akwiingula kuluzi naa pe, lemba bwiinguzi mubusena bupedwe
8. Pa ciindi kuli sikwiingula ape mibuzyo kumamanino
9. Komulumba sikwiingula mibuzyo mwamana cibeela camibuzyo.

CIBEELA CITAANZI: BUPONI BWABANTU

1. Wakaba amyaka yongaye nowakali kusekelela kuzyalwa kwako ciindi cakamana?
 1. Myaka iili 15 kusikila ku 24
 2. myaka iili 25 kusikila ku 34
 3. Myaka iili 35 kusikila ku 44
 4. Myaka iili 45 kusikila ku 49
2. uli muciiimo nzi kumakwatane?
 1. nsekwetwe
 2. ndilikwetwe
 3. Ndakalekwa
 4. Twakaandaana
 5. Ndimukamufu
3. ino uli walupailo luli?
 1. Cikkilisto
 2. ci cawa (muzilimo)
 3. ci Hindu
 4. ci Bbuddisiti
 5. zimwi (pandulula).....
4. wakagolela muli kwiiya?
 1. Nseyiide
 2. . ku pulayimali
 3. ku sekondali
 4. ku koleji
 5. ku cikolo cipati
5. ino ubeleka mulimo nzi?
 1. mukaintu waang'anda
 2. Ndimubelesi
 3. Ndilalibelekela
 4. Nsebeleki
6. uvwola mali nzi a mwezi?

1. taasiki ku K500 000.00 amwezi
2. akati ka K500 000.00 a K1 000 000.00 amwezi
3. ndilainda a K1 000 000.00 amwezi
4. Taakwe
7. sena ulijisi cakukwaabana naa kutumina twaambo abamwi muluwaile naa mumincini imwi?
 1. Ndijisi
 2. . nsejisi
8. . ino ujisi bana bongaye?
 1. Kwiina
 2. omwe kusikila kuli bone
 3. balainda kuli bosanwe

**CIBEELA CABILI: LUZYIBO LUJATIKIZYA ZITONDEZYO ZYANTENDA ZIBOOLA
AKAAMBO KAKUMITA**

9. Sena wakamvwa kale zitondezyo zyantenda ziboola akaambo kakumita?
 1. Ndakamvwa
 2. Nsena mwva (sotoka koya kumubuzyo 14)
10. Naa wazumina, kopandulula ncocaamba “zitondezyo zyantenda ziboola akaambo kakumita.”
 1. Nzitondezyo zitondezya kuti mukaintu, naa pe ida lilaapenzi kwiinda mukuciswa mwida, kuzwa bulowa kubukaintu, alimwi akuciswa kapati mutwe.
 2. Zimwi (pandulula)
 3. Tandizyi
11. Wakaajana kuli makani antenda eezi?
 1. Kuba silisi
 2. Kuli bamukwashi
 3. Kwiinda mumitende
 4. Zimwi nzila (pandulula)
12. Sena kufwumbwa mukaintu inga waba azitondezyo zya ntenda mukumita kwakwe?

1. liyi
2. Peepe
3. Tandizyi

13. Amba zitondezayo zyantenda nzyozi mukumita (enga kazinguluzingulu)

1. Kuzwa bulowa kunso kufwumbwa ciindi mukaintu anooli ada
2. Kuzwa meenda munzila yamwana(kunso)
3. Kuzimba mubili
4. Kuluka kapati kuzwa mumweezi wane kuya kumbele
5. Kuciswa kapati mutwe akusiya ameso
6. Kupya mubili
7. Kutaputauka kwamwana uuli mwida kapati mumyeezi yotatwe yamamanino
8. Kuzwa zintu zinunka kunso
9. Kulimvwa kukatala naa kulema kapati
10. Kuciswa kwamwida kwaandeene
11. Kucisa ciindi cakutila meenda
12. Kuciswa musana lyoonse

14. Mumizeezo yako, sena cilabulika kuti mukaintu azyibe zitondezayo zya ntenda kuciindi cakuba ada?

1. liyi
2. Peepe
3. Tandizyi

15. Kopa twaambo kubwiinguzi bwako kumubuzyo wainda (14)

1. liyi nkaambo bayoosilikwa
2. Peepe nkaambo zitondezayo eezi zilainda
3. Bumwi bupanduluzi

16. Sena wakali azitondezayo zyantenda ciindi nowakali ada?

1. liyi
2. Peepe

17. Ino nzitondezayo nzi zyakakucitikila?

.....

.....

18. Ncinzi ncowakacita ciindi nowakabona zitondezyo eezi?

1. Ndakaunka kucibbadela kuyoosilikwa
2. Ndakaya kubang'anga
3. Ndakakkala amunzi
4. Ndakakapula lugwasyo kuzwa kuli bamacembele (naa bwiinguzi ngu 2, 3, a 4, koya kumubuzyo 21).

19. Sena wakapegwa twaambo tujatikizya zitondezyo zyantenda nzyowakajisi kucibbadela?

1. liyi
2. Peepe (sotoka koya kumubuzyo 21)

20. Naa ngu iyyi, ntwaaambo nzi ntowakapegwa?

1. Zitondezyo zyantenda zyakapandululwa alimwi ndakagwasigwa akuyumizigwa
2. Zimbi (pandulula)

21. Ino nzintu nzi zileleta buyumuyumu naa kunyongana kumukaintu namitide?

1. Kukomena kumyaaka yakuzyalwa (myaaka iili 35 kuya kumbele) naape ucili musyoonto (myaaka itasiki ku 20).
2. Ncamubulowa kuzwa kubazyali
3. Malwazi akaliko kotana mita
4. Aambi (pandulula)
5. Tandizyi.

CIBEELA CATATU: TWAAMBO TUJATIKIZYA BUBELESI BWANSEBA

22. Utola ciindi cilamfu buti kuya kucibbadela?

1. Tacisiki ku woola lyomwe
2. Cilainda kuwoola lyomwe (pa mweelwe)

23. Ino ubelesya bweende bulibuti noya kucibbadela?

1. Ndeenda amaulu
2. Ndacovwa ncinga
3. Ndibelesya cikkocci

4. Ndibelesya zimbayambaya
24. Kwainda ciindi cilamfu buti kuzwa nowakamitide
 1. Mwaaka omwe kusika myaaka ili yosanwe
 2. Myaaka ili cisambomwi kusikila kuli ili kkumi
 3. Myaaka iinda ku kkumi
25. Sena wakali kwiinka kucipimo ciindi nowakali ada lyamamanino?
 1. liyi
 2. Peepe (sotoka koya kumubuzyo 28)
26. Ino wakaenda nyendo zyangaye kuya kucipimo kuda lyakainda?
 1. Ciindi comwe
 2. Ziindi zyobile
 3. Ziindi zyotatwe
 4. Ziindi zyone
 5. Ziindi ziinda kuli zyone (pa twaambo)
27. Ino wakali kutola ciindi cilamfu buti abasilisi?
 1. Tuvwalu vwalu tutasiki kuli tosanwe
 2. Akati katuvwalu vwalu tuli tosanwe atuli kumi
 3. Akati katuvwalu vwalu tuli kumi amakumi obile
 4. Akatikati katuvwaluvwalu tuli makumi obile amakumi otatwe.
 5. Akatikati katuvwaluvwalu tuli makumi otatwe amakumi one
28. Sena kuli nowakaisigwa zitondezyo zyantenda abasilisi?
 1. liyi
 2. Peepe (sotoka koya ku 31)
29. Naa wazumina, sena wakamvwisisisya ncowakaisigwa?
 1. liyi
 2. Peepe
30. Sena wakapegwa ciindi cakubuzya mibuzyo?
 1. liyi
 2. Peepe
31. Kuti naa wamita alimwi, sena inga uyooinka nkukonya kucibbadela kuyoopimwana?

1. liyi
 2. Peepe
32. Pa twaambo kubwiinguzi bwako buli atala aawa (31)
1. liyi nkaambo kabubelesi bubotu
 2. Peepe nkaambo kabubelesi butali kabotu
 3. Tumbi twaambo (pandulula)

CIBEELA CANE: MIZEEZO IJATIKIZYA ZITONDEZYO ZYANTENDA KUDA

33. Mumizeezo yako, uyeeya kuti ncinzi ciletela zitondezyo zyantenda kumukaintu umitide?
1. Malwazi naa bube busilikwa muzibbadela
 2. Nkaambo katunsiya nsiya twabasikale
 3. Twaambo tumbi (pandulula)
 4. Tandizyi
34. Mumizeezo yako, sena mukaintu inga walikwabilila kuntenda ziboola a mada?
1. liyi
 2. Peepe (sotoka koya kumubuzyo 36)
 3. Tandizyi (sotoka koya kumubuzyo 36)
35. Kutu naa wazumina, ino zitondezyo zyantenda inga zyakwabililwa buti? Pa bupanduluzi

.....

.....

36. Mumizeezo yako, ino mukaintu uuli ada weelede kucita buti wabona zitondezyo zyantenda?
1. Kuya kucibbadela kuti apegwe malailile
 2. Kujana lugwasyo kuzwa kubang'anga
 3. Kujana lugwasyo kuzwa kuli bamacembele
 4. Nzila zimbi (pandulula)
 5. Tandizyi

37.Sena ulijisi tunsia nsiya tujatikizya ntenda kumada tunga twakulesya kuya kucibbadela kuti waba azitondezyo zya ntenda kuda?

1. Iyi

2. Peepe

38.Naa wazumina, ino ntunsia nsiya nzi ntozyi tujatikizya zitondezyo zya ntenda kumada? (pandulula).....

.....

.....

Twasika kumamanino akuvwuntauzya. Ndamulumba kapati mukutola lubazu.

APPENDIX V

FOCUS GROUP DISCUSSION GUIDE ON KNOWLEDGE AND PERCEPTION OF WOMEN TOWARDS DANGER SIGNS IN PREGNANCY IN CHOMA RURAL DISTRICT

Number of participants

Composition of participants

Language used during discussion

Place of discussion

Duration of discussion

Date

INSTRUCTIONS

1. Welcome the participants.
2. Introduce yourself and the assistants to the respondents.
3. Explain the purpose of the discussion.
4. Obtain verbal consent from the participants to continue with the discussion.
5. Assign number to each participant to ease discussion.
6. Assure the participants of anonymity and confidentiality and encourage free participation in the discussion.
7. Respect each participant's views.
8. Thank the participants at the end of the discussion.

QUESTIONS

A. Knowledge about danger signs of pregnancy

1. What is meant by “danger signs in pregnancy”?
2. What are the danger signs in pregnancy that you know?
3. Can any pregnant woman develop danger signs in pregnancy?
4. What are the risk factors for developing pregnancy complications?

B. Reception by health personnel

1. Have you attended antenatal care before?
2. How did the health workers receive you?
3. How much time did you spend with the health care provider?
4. Have you been taught about danger signs in pregnancy at the clinic before?
5. Were you given time to ask questions?
6. Do you discuss freely with the health care providers any problems you may have in pregnancy?

C. Cultural/traditional beliefs

1. What are the cultural/traditional beliefs about danger signs in pregnancy that you know?
2. According to Tonga custom, what causes danger signs in pregnancy?

D. Perceptions about danger signs of pregnancy

1. What causes danger signs in pregnancy?
2. What should a pregnant woman do to prevent danger signs in pregnancy?
3. What should a pregnant woman who develops danger signs in pregnancy do?

E. Suggestions for improving knowledge about danger signs of pregnancy

1. What measures should be undertaken to increase knowledge about danger signs in pregnancy among women?
2. Who should teach danger signs in pregnancy?

We have come to the end of our discussion. Thank you very much for your participation

CIKUMBATIZYO CASANU

**MALAILILE AKWAABANA TWAAMBO MUTUBUNGA KUJATIKIZYA LUZYIBO
AMIZEEZO YANTENDA KULI BALI AMADA MUBBOMA LYA CHOMA NKOLILI
MUMINZI**

Mweelwe wabasikutola lubazu

Basangene buti

Mulaka uubelesegwa mukwiizya

Busena bwakwiizyila

Ciindi cakatolwa mukwiizya

Buzuba amwezi

MALAILILE

1. Kotambula basikutola lubazu.
2. Kolipandulula akupandulula basikugwasya mukwiizya.
3. Kopandulula muzeezo wakwiizya kwanu.
4. Kojana kuzumizyigwa kuli basikutola lubazu.
5. Kopa ma nombolo kuli omwe omwe wabasikutola lubazu.
6. Kosyomezya maseseke akutazyibwa, akubakulwaizya kuti baanguluke mukwiizya koonse.
7. Kolemeka mizeezo yoonse yapegwa kuzwa kubantu boonse.
8. Lumba basikutola lubazu kumamanino akwiizya

MIBUZYO

A. Luzyibo lujatikizya zitondezyo zyantenda kumukaintu uuli ada

1. Caamba nzi kuba azitondezyo zyantenda kuda?
2. Nzitondezyo nzi zyantenda nzyozyi kumuntu uuli ada?
3. Sena kufumbwa mukaintu inga waba azitondezyo zyantenda anooli bubi?
4. Zintu nzi izipa kuti mukaintu abe abuyumuyumu naa makatazyo ciindi nali ada?

B. Butambuzi abasilisi

1. Sena wakaliko kale kucipimo cabasimada?
2. Ino basilisi bakakutambula buti?
3. Ino wakatola ciindi cilamfu buti abasilisi?
4. Sena kuli nowakaiisyidwe amakani ajatikizya zitondezyo zyantenda kumukaintu uuli ada abasilisi kucibbadela?
5. Sena wakapegwa ciindi cakubuzya mibuzyo?
6. Sena inga mulalikwaya cakwaanguluka mukwiizya kwanu kujatikizya makatazyo amada abasilisi banu?

C. Kusyoma tumsiya nsiya

1. Uzyi tumsiya nsiya nzi kujatikizya zitondezyo zyantenda kumukaintu uuli ada?
2. Kweendelanya aziyanza zyaba Tonga, ino zitondezyo zyantenda ziboola buti?

D. Manjezyeezya aajatikizya zitondezyo zyantenda kuda

1. Ncinzi cileta zitondezyo zyantenda kuda?
2. Ino mukaintu uuli ada weelede kucita buti kukasya zitondezyo zyantenda?
3. Ino mukaintu watalika kuba azitondezyo zyantenda weelede kucita nzi?

E. Mizeezo igwasilizya kusumpula luzyibo lwa zitondezyo zyantenda kuda

1. Ino ncinzi ceelede kucitwa kutegwa luzyibo lwabamakaintu amakani ajatikizya zitondezyo zyantenda kuda luvwule?
2. Nguni weelede kuyiisya zitondezyo zyantenda kuda?

Twasika kumamanino akwiizya kwesu. Twalumba kapati kutola lubazu kwanu

APPENDIX VI

MARKING KEY FOR THE STUDY VARIABLES

QUESTION NUMBER	QUESTION	CORRECT ANSWER	MAXIMUM SCORE
SECTION B: knowledge about danger signs of pregnancy			
9	Have you ever heard of 'danger signs of pregnancy?'	yes	1
10	If yes, what is the meaning of 'danger signs of pregnancy?'	An indication that all is not well with the pregnancy	1
11	What is the source of your information?	Health personnel 2, relatives 1, friends 1, media 2	2
12	Can any woman develop danger signs of pregnancy?	Yes 2, no 1, don't know 0	2
13	Name the danger signs of pregnancy that you know	Vaginal bleeding in pregnancy, leaking of amniotic fluid from birth canal, unusual abdominal pain, cramping, pelvic pressure, persistence backache, persistent nausea and vomiting, persistent headache or blurred vision, marked edema, pain on micturition, fever, vaginal discharge, extreme tiredness, decreased fetal movements	14
14	In your opinion, is it important for women to know the danger signs of pregnancy?	Yes 2, no 1, don't know 0	2
15	Give reasons for your answer to question 14	Because they will be able to seek care on time if they experience them	1
16	Have you ever experienced a danger sign of pregnancy?	Yes 1 or no 1	1
17	If yes, what was/were the danger signs you experienced?	mentions any of the above danger signs above correctly	5
18	What did you do when you experienced the danger sign/s of pregnancy?	Visited a health center to seek medical care	1
19	Were you given information about the danger sign you experienced at the clinic?	yes	1
20	If yes, what information were you given?	Counseling about cause of danger sign and what to do if it occurs	1
21	What are the risk factors for developing pregnancy complications that you know	Older age above 35 years, younger maternal age below 20 years, genetic predisposition, pre existing medical condition	4
SECTION C: service related information			
22	How much time do you take to reach your nearest health center?	Less than 1 hour 2, more than 2 hours 1	2
23	What means of transport do	walking 1, driving 3, hiking	4

	you use to go to health center?	2, cycling 4	
24	When was the last time you were pregnant?	1-5 years ago 3, 6-10 years ago 2, more than 10 years ago 1	3
25	Did you receive antenatal care during your last pregnancy?	Yes 2, no 1	2
26	How many antenatal visits did you make during your last pregnancy?	Four visits 3, 3 visits 3, 2 visits 2, 1 visit 1	4
27	How much time did you spend with the health care provider	Less than 10 minutes 1, 10-20 minutes 2, 21-30 minutes 3, 31-40 minutes 4	4
28	Have you ever been taught about danger signs of pregnancy at the health center?	Yes 2, no 1	2
29	If yes, did you understand what you were taught?	Yes 2, no 1	2
30	Were you given time to ask questions?	Yes 2, no 1	2
31	If you became pregnant again, would you attend antenatal care at the same clinic?	Yes 2, no 1	2
32	Give reasons for your answer to question 31 above	Yes because quality of services is good 2, no because quality of services is bad 1	2
SECTION D: perceptions about danger signs of pregnancy			
33	In your opinion, what causes the danger signs of pregnancy?	Medical causes 2, traditional causes 1, don't know 0	2
34	In your opinion, can a pregnant woman prevent danger signs of pregnancy?	Yes 1, no 2, don't know 0	2
35	If yes, how can danger signs of pregnancy be prevented?	Can not be prevented	1
36	In your opinion, what should a pregnant woman who develops danger signs of pregnancy do?	Seek medical advice 3, seek help from a traditional healer 2, seek help from older women 1	3
37	Do you have any cultural beliefs about danger signs of pregnancy that can hinder you from seeking medical care if you developed them?	Yes 1, no 2	2
38	What are the cultural beliefs about danger signs of pregnancy that you know?	Mentions any cultural beliefs	2

KEY

SECTION B: knowledge of danger signs of pregnancy

High knowledge 8-11

Medium knowledge 4-7

Low knowledge 0-3

SECTION D: perceptions about danger signs of pregnancy

Positive perception 6-9

Negative perception 1-5

APPENDIX VIII

LETTER TO THE DISTRICT DIRECTOR OF HEALTH

The University of Zambia,
School of Medicine,
Department of Nursing Sciences,
P. O. Box 50110,
LUSAKA.

4th November, 2009.

UFS: The Head of Department,
Department of Nursing Sciences,
School of Medicine (UNZA),
P. O. Box 50110,
LUSAKA.

The District Director of Health,
Choma District Health Office,
CHOMA.

Dear Sir/Madam,

RE: PERMISSION TO COLLECT RESEARCH DATA

I am a student at the above named institution, currently pursuing a Master of Science in nursing degree.

In partial fulfillment of this program, I am required to conduct a research study. My research topic is, "knowledge and perception of women towards danger signs in pregnancy in Choma Rural district". The study will involve interviewing women in the child-bearing age (15-49 years) at Mapanza Rural Health Center, and will be conducted from April, 2009 to March, 2010.

I am, therefore asking for permission to collect the research data from the above mentioned area. Find attached the letter of clearance from UNZA Biomedical Research Ethics Committee.

Your favorable consideration on my request will be highly appreciated.

Sincerely, yours,

Nambala Brenda Sianchapa (Mrs.).

APPENDIX X

LETTER TO THE DISTRICT COMMISSIONER

The University of Zambia,
School of Medicine,
Department of Nursing Sciences,
P. O. Box 50110,

LUSAKA.

4th November, 2009.

UFS: The Head of Department,
Department of Nursing Sciences,
School of Medicine (UNZA),
P. O. Box 50110,

LUSAKA.

The District Commissioner,
Choma District,

CHOMA.

Dear Sir/Madam,

RE: PERMISSION TO COLLECT RESEARCH DATA

I am a student at the above named institution currently pursuing a Master of Science in nursing degree.

In partial fulfillment of this program, I am required to conduct a research study. My research topic is "knowledge and perception of women towards danger signs in pregnancy in Choma rural district". The study will involve interviewing women in the child-bearing age (15-49 years), and will be conducted from April, 2009 to March, 2010 at Mapanza Rural Health Center.

I am therefore asking for permission to collect the research data from the above mentioned area. Attached is the letter of clearance from UNZA Biomedical Research Ethics Committee.

Your favorable consideration on my request will be highly appreciated.

Sincerely, yours,

Nambala Brenda Sianchapa (Mrs.).

