

FACTORS INFLUENCING WOMEN'S PREFERENCE FOR HOME BIRTHS IN THE MUTARE DISTRICT, ZIMBABWE

By

Engeline Muranda

Submitted in fulfillment of the requirements

for the degree of

MASTER IN PUBLIC HEALTH

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: PROF VJ EHLERS

June 2013

DEDICATION

I dedicate this dissertation to my dear parents, Stephen Muranda (late) and Grace Muranda, as well as to my husband Addmore Mawere (late) my lovely children Virginia, Vivienne and Addmore jnr.

Student number: - 32911467

DECLARATION

I declare that **FACTORS INFLUENCING WOMEN'S PREFERENCE FOR HOME BIRTHS IN THE MUTARE DISTRICT, ZIMBABWE** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

.....

Engeline Muranda

6 August 2013

Date

ACKNOWLEDGEMENTS

First and foremost, I praise God the Almighty for giving me the strength and wisdom to complete this study.

I would also like to express my appreciation to the following people for their invaluable and unending support:

- Prof VJ Ehlers, for her tireless guidance, support, encouragement and the knowledge and skills you passed on to me. I am immensely indebted to you.
- The Permanent Secretary of the Ministry of Health and Child welfare (Zimbabwe) and the Manicaland Provincial Medical Director for allowing me to use the data from the district, the District Medical Officer of Mutare District and staff members of the health centers that participated in this study.
- My family for their encouragement, support and for believing in me.
- My colleagues and friends for their invaluable contributions.
- Ms Kudzanai Matereke for her assistance with the data analysis and with the interpretation of the statistics.

To you all please accept my sincere gratitude, appreciation and love and I wish you all strength in your endeavors.

FACTORS INFLUENCING WOMEN'S PREFERENCE FOR HOME BIRTHS IN THE MUTARE DISTRICT, ZIMBABWE

STUDENT NUMBER: 3291 146 7
STUDENT: Engeline Muranda
DEGREE: Master of Public Health
DEPARTMENT: Health Studies
SUPERVISOR: Prof VJ Ehlers

ABSTRACT

The study attempted to identify factors influencing women's preference for home births in the Mutare District, Zimbabwe. A quantitative, descriptive, exploratory, cross sectional survey, gathering data by conducting structured interviews with 150 women, was used. All 150 women attended antenatal clinics but did not deliver their babies at health care facilities. The research results indicated that home deliveries might decline if:

- the hospital/clinic fees were reduced or removed
- transport would be available for women in labour to reach hospitals/clinics
- shelters were built for pregnant women at hospitals/clinics
- clinics were well equipped and had sufficient numbers of midwives
- women had received more effective health education on the advantages of institutional deliveries and on the danger signs of pregnancy/labour complications
- nurses/midwives would treat patients respectfully.

Unless these factors are addressed, the number of home deliveries might not decline, and the high maternal/infant mortality and morbidity rates in this district will persist.

KEY CONCEPTS

Ante-natal care (ANC), Health Belief Model (HBM), home births, maternal mortality/morbidity rates, midwifery in Zimbabwe, women's health in Zimbabwe

TABLE OF CONTENTS

CHAPTER 1 ORIENTATION TO THE STUDY

1.1 INTRODUCTION	1
1.2 BACKGROUND TO THE RESEARCH PROBLEM	1
1.3 STATEMENT OF THE RESEARCH PROBLEM	6
1.4 AIM OF THE STUDY	7
1.4.1 Research purpose	7
1.4.2 Research objectives	7
1.4.3 Research questions	8
1.5 SIGNIFICANCY OF THE STUDY	8
1.6 DEFINITIONS OF KEY TERMS	9
1.6.1 Live birth	9
1.6.2 Maternal death	9
1.6.3 Maternal mortality (MMR)	9
1.6.4 Neonatal mortality rate (NMR).....	10
1.6.5 Neonatal death	10
1.6.6 Skilled midwifery attendance	10
1.6.7 Skilled birth attendant (SBA)	10
1.7 FOUNDATIONS OF THE STUDY	10
1.7.1 Theoretical framework	10
1.7.2 Components of the Health Belief Model (HBM)	12
1.7.1.1 Individual perceptions	12
1.7.1.2. Modifying factors	13
1.7.1.3 Variables affecting the likelihood of initiating actions	14
1.7.3 Application of the Health Belief Model to investigating factors influencing Women's preferences for home deliveries in the Mutare District	16
1.8 RESEARCH DESIGN AND METHOD	16
1.8.1 Quantitative research	16

1.8.2 Descriptive studies	17
1.8.3 Cross-sectional studies	17
1.8.4 Exploratory studies.....	18
1.9 SCOPE AND LIMITATIONS OF THE STUDY	18
1.10 STRUCTURE OF THE DISSERTATION	19
1.11 SUMMARY	19

CHAPTER 2 LITERATURE REVIEW

2.1 INTRODUCTION	20
2.2 WOMEN'S INDIVIDUAL PERCEPTIONS CONCERNING THEIR PREFERRED PLACES TO DELIVER THEIR BABIES	21
2.3 MODIFYING FACTORS WHICH COULD INFLUENCE WOMEN'S CHOICES OF HOME VERSUS INSTITUTIONAL DELIVERIES	21
2.3.1 Demographic factors	21
2.3.1.1 Age	22
2.3.1.2 Race	23
2.3.1.3 Gender issues	23
2.3.1.4 Educational status	24
2.3.1.5 Cultural factors	25
2.3.2 Socio-psychological variables	26
2.3.2.1 Personality	26
2.3.2.2 Social class and economic status	26
2.3.2.3 Peer pressure	27
2.3.3 Structural variables	28
2.3.3.1 Knowledge about safe assisted deliveries	28
2.4 VARIABLES AFFECTING THE LIKELIHOOD OF WOMEN TO INTIATE ACTIONS TO DELIVER THEIR BABIES AT HEALTH CARE INSTITUTIONS	30
2.4.1 Perceived benefits of actions	30
2.4.2 Perceived barriers to accomplishing health-related actions	31
2.4.2.1 Staff attitudes	31
2.4.2.2 Accessibility and affordability of health care services	32
2.5 SUMMARY	34

CHAPTER 3 RESEARCH METHODOLOGY

3.1 INTRODUCTION.....	35
3.2 RESEARCH DESIGN	35
3.2.1 Quantitative study	35
3.2.2 Descriptive study	36
3.2.3 Cross-sectional studies	37
3.3 RESEARCH METHOD	37
3.3.1 Population, sampling procedures and sample	37
3.3.1.1 Population	37
3.3.1.2 Site sampling	38
3.3.1.3 Sampling respondents	38
3.3.2 Data collection	39
3.3.2.1 Development and testing of the data collection instrument	40
3.3.2.2 The data collection instrument	41
3.3.2.3 Ethical considerations	42
3.3.3 Data analysis	44
3.4 VALIDITY AND RELIABILITY	44
3.5 SUMMARY.....	45

CHAPTER 4 ANALYSIS AND DISCUSSION OF THE FINDINGS

4.1 INTRODUCTION	46
4.2 RESEARCH FINDINGS	47
4.2.1 General Information.....	47
4.2.1.1 Places where respondents delivered their babies	47
4.2.1.2 Antenatal clinic visits	48
4.2.2 Socio-demographic factors	50
4.2.2.1 Respondents' marital status	51
4.2.2.2 Respondents' ages	52
4.2.2.3 Respondents' level of education	53
4.2.2.4 Respondents' occupational status	53
4.2.2.5 Parity of respondents.....	54

4.2.3 Women's perceptions/experiences of maternity services	56
4.2.4 Affordability of maternity services	59
4.2.5 Socio-cultural factors which could influence women's preferences for places to deliver their babies	61
4.2.6 Knowledge about safe assisted deliveries	61
4.2.6.1 Danger signs for which women in labour would seek medical care	63
4.2.6.2 Information received from ANC clinics about caring for the newborn baby and about contraception	64
4.2.6.3 Emergency delivery kits	65
4.2.7 Procedure followed when labour commenced	66
4.2.7.1 Actions taken when labour started	66
4.2.7.2 Reasons for home deliveries	67
4.2.7.2 Place of delivery	69
4.2.7.3 Problems experienced during and after delivery.....	69
4.2.7.4 Persons consulted about problems experienced after delivery	70
4.2.7.5 Women's suggestions for improving maternity services.....	70
4.3 SUMMARY	72

CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION	73
5.2 CONCLUSIONS	74
5.2.1 Reasons why women, who used ANC services, did not deliver their Babies at health care institutions in the Matare District	74
5.2.1.1 ANC-related aspects' potential impact on women's preferences to deliver their babies at health care institutions	74
5.2.1.2 Socio-demographic aspects' potential impact on women's preferences not to deliver their babies in health care institutions	75
5.2.2 Problems women encountered during and after home deliveries of babies...	77
5.3 LIMITATIONS OF THE STUDY	78
5.4 RECOMMENDATIONS	79
5.5 CONTEXTUALISING THE RESEARCH RESULTS, CONCLUSIONS AND	

RECOMMENDATIONS WITHIN THE MAJOR COMPONENTS OF THE	
HEALTH BELIEF MODEL	80
5.5.1 Individual perceptions	81
5.5.2 Modifying factors	81
5.5.3 Variables affecting the likelihood of initiating actions	82
5.6 SUMMARY	83
LIST OF REFERENCES	84

LIST OF TABLES

1.1 Key concepts and definitions of the Health Belief Model (HBM)	11
4.1 Respondents' total number of ANC visits (N=150)	49
4.2 Gestation at first ANC visit (N=150)	49
4.3 Socio-demographic factors (N=150)	50
4.4 Gravity of respondents (N=150)	54
4.5 Respondents' number of live children (n=142)	55
4.6 Number of children who died (N=150)	56
4.7 Perceptions of the women concerning antenatal care services (N=150)	58
4.8 Costs of transport and ANC services (N=150)	60
4.9 Cultural practices (N=150)	61
4.10 Potential danger signs for which women would seek medical care during and after labour	63
4.11 Actions taken when labour started (n=208)	67

LIST OF FIGURES

1.1 The Health Belief Model's major constructs	15
4.1 Places where respondents' babies were delivered (N=150)	48
4.2 Respondents' marital status (N=150)	51
4.3 Information respondents received from the ANC clinic (reflected in percentages (N=150)	64
4.4 Respondents who had emergency delivery kits (N=150)	65
4.5 Contents of emergency home delivery kits (N=150)	66
4.6 Social factors influencing women's preferences for home deliveries	

(N=150).....76

LIST OF ANNEXURES

Annexure 1 MAP OF ZIMBABWE

Annexure 2 LETTERS REQUESTING AND GRANTING PERMISSION TO
CONDUCT STUDY

Annexure 3 STRUCTURED INTERVIEW SCHEDULE (English and Shona)

Annexure 4 INFORMED CONSENT FORM

LIST OF ABBREVIATIONS USED THROUGHOUT THE DISSERTATION

AIDS – Auto-Immune Deficiency Syndrome

ANC – antenatal care

APH – antepartum haemorrhage

ART – anti-retroviral treatment

ARVs – anti-retrovirals

CSO – Central Statistics Office (of Zimbabwe)

DOH – Department of Health (of South Africa)

MMR – maternal mortality rate

NMR – neonatal mortality rate

PASS – Poverty Assessment Survey Study

PIH – pregnancy induced hypertension

PNC – post natal care

PPH – post partum haemorrhage

HIV – Human Immunodeficiency Virus

MOHCW – Ministry of Health and Child Welfare (of Zimbabwe)

PCN – primary care nurse

SBA – skilled birth attendant

SSA – sub Sahara Africa

STI – sexually transmitted infection

TBA – traditional birth attendant

UNICEF – United Nations Children's Emergency Fund

UNFPA – United Nations Family Planning Association

Unisa – University of South Africa

USA – United States of America

WHO – World Health Organization

ZDHS – Zimbabwe Demographic and Health Survey

ZHDR – Zimbabwe Human Development Report

ZMNHRM – Zimbabwe Maternal and Neonatal Health Reform Memorandum

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Globally 1 500 women die every day due to complications of pregnancy and childbirth (WHO 2007a:3). Of these deaths, 98.0% occur in the developing world where there is a lack of resources and skilled care for the prevention and management of life threatening obstetric complications. The presence of skilled birth attendants and access to essential obstetric care during the delivery process has been shown to reduce global maternal mortality and morbidity rates, as well as global neonatal mortalities and morbidities (World Health Organization [WHO] 2007b:3). However, in some developing countries, including Zimbabwe, many women's preferred delivery sites continue to be their homes, often with unskilled attendants, in spite of the availability of institutional delivery services. This preference for home deliveries might jeopardise these women's and their babies' lives and wellbeing.

1.2 BACKGROUND TO THE RESEARCH PROBLEM

Since the 1940s, maternal deaths have declined in developed countries. However, developing countries, especially sub-Saharan African (SSA) countries, where women's fundamental rights might remain unmet, maternal mortality rates remain high (Reproductive Health Service Delivery Guidelines [RHSDG] in Ministry of Health and Child Welfare [MOHCW] 2004:23). It is estimated that every minute somewhere in the world, a woman dies because of complications arising from pregnancy and childbirth (WHO 2004a:11). Some of these deaths are avoidable, especially if skilled medical assistance and facilities are available. Globally, 80.0% of

maternal deaths (WHO 2004a:11) result from complications encountered during pregnancy, delivery or the puerperium.

The WHO (2008:3) estimated that only 53.0% of pregnant women in developing countries deliver their babies with the help of skilled birth attendants. The target of the fifth Millennium Development Goal (MDG 5) emphasises that 90% of births in low and middle income countries should be conducted by skilled birth attendants (SBAs). However, estimates indicate that 130-180 million births will take place without SBAs in SSA and in South Asia from 2011 till 2015, and 90% of these non-SBA births will occur in rural areas. "Currently, there are more non-SBA births in South Asia than in sub-Saharan Africa, but our projections suggest that the regions will have approximately the same number of non-SBA births by 2015" (Crowe, Utley, Costello & Pagel, 2012:1). In Zimbabwe, 65% of babies are delivered in health care institutions (Zimbabwe Demographic Health Survey [ZDHS] 2010/2011:113). This implies that 35% of babies are not delivered in health care institutions, and probably without skilled assistance.

The common causes accounting for 50.9% (MOHCW 2007:9) of all maternal deaths in Zimbabwe are haemorrhage (post- and ante-partum), sepsis, pregnancy induced hypertension (PIH), obstructed labour and unsafe abortions. HIV/AIDS (26.9%) is the most common indirect cause of maternal and neonatal mortalities and morbidities (MOHCW 2007:9). The HIV prevalence rate at ante-natal clinics (ANCs) in Zimbabwe is 13.7% (MOHCW 2010:3). These women would benefit if they could deliver their babies in health care institutions, assisted by skilled birth attendants who could provide health education, basic emergency obstetric and neonatal care and comprehensive emergency obstetric and neonatal care and prevention of mother-to-child transmission (PMTCT) of HIV services.

Since 2000, Zimbabwe has experienced political and socio-economic instability, recurrent droughts, food insecurity and the HIV/AIDS pandemic, which have dominated the development and humanitarian agendas (Zimbabwe Maternal and Neonatal Health Road Map [ZMNHRM] in MOHCW 2007-2009:3). Zimbabwe has experienced hyper-inflation rates of 231 million per cent per annum (Central Statistics Office [CSO] 2007:97). Shortages of foreign currency, the emigration of skilled health care workers and insufficient supplies of medical commodities and equipment have undermined the capacity of Zimbabwe's public health services (MOHCW 2004a:13). Due to the status of the national economy, the unemployment rate exceeded 80.0% during 2006 (Zimbabwe Human Development Report 2007:86) and poverty levels increased from 20% in 1995 to 48% in 2003 (Poverty Assessment Study Survey [PASS] 2005:45). Resources for providing quality health services are limited, necessitating more efficient and effective management of the limited available resources. Zimbabwe needs to provide solutions to the large numbers of obstetric complications which occur annually (NMHSZ 2004:18). Viewed in the light of an already overburdened health care delivery system and an ever-worsening socio-economic situation, challenges exist to address the maternal and neonatal mortality and morbidity rates in the Mutare District of Zimbabwe. If pregnant women could utilise safe and effective institutional delivery services, the maternal as well as the neonatal mortality and morbidity rates could be reduced.

Zimbabwe's health care system has collapsed (The Reproductive Health Agenda 2009:6), explaining why limited recent health-related statistics are available. There are limited medicines and intravenous fluids. In most cases, families of severely ill patients have to buy intravenous fluids, administration sets, suturing materials and other essential supplies (Zimbabwean Situation 2008 November 18) before the patient can get admitted to a maternity ward, or even to a general hospital. Many local and

foreign doctors left Zimbabwe. There is also an acute shortage of nurses and midwives, according to the Ministry of Health and Child Welfare's (MOHCW 2009) report on reproductive health assessment. According to the MOHCW (2009), 48% of doctors' and 86% of nurses' posts were filled in Zimbabwean institutions, and 29% of the nurses' posts were occupied by midwives. There were shortages of doctors at all health care levels. Provincial hospitals had the fewest doctors with a vacancy rate of 76%. The few mission hospitals were relatively well staffed with a vacancy rate of 18%.

Zimbabwe battles the highest inflation rate in the world of 231 million percent per annum (CSO 2007:97). This makes it difficult for doctors and nurses to live and work in Zimbabwe. The Zimbabwean government had to train primary care nurses (PCN) for 18 months and they work at most rural health centers. The PCNs are not midwives, nor registered general nurses, hence they cannot provide skilled care at the level of trained general nurses or midwives.

Some Zimbabwean pregnant women use ANC services but fail to deliver their babies in health care institutions. In rural Zimbabwe 32% of women delivered their babies at home during 1999 (ZDHS 1999/2000:123-125). The Maternal and Perinatal Mortality Study 2007 (MOHCW 2009) reported that 42.3% of maternal deaths occurred at home and 4.1% occurred in transit to health care facilities during 2008. In case of obstetric complications, a woman in a health care institution could access specialised services more readily than would be the case for home deliveries conducted by traditional birth attendants (TBAs) or other unskilled attendants such as mothers or mothers-in-law, who might lack midwifery skills. A study conducted among 1 226 home birth attendants in low income countries, indicated that these persons "... were often illiterate, could not read numbers and had little formal training. Most had few of the

skills or access to tests, medications and equipment that are necessary to reduce maternal, fetal or neonatal mortality” (Whitworth & Goldenberg 2012:1).

The 2002 census estimated the maternal mortality ratio (MMR) at 1 100 per 100 000 live births (CSO 2002:96). From 2005 till 2006, Zimbabwe’s maternal mortality ratio was estimated to be 555 per 100 000 live births (ZDHS 2005-2006:125). The MOHCW’s maternal and perinatal mortality study (MOHCW 2007:15) indicated that this rate had gone up to 725/100 000 in 2007. According to the ZDHS (2010/2011:278) 960 per 100 000 women died during and after childbirth in Zimbabwe during 2010. These demographic indices indicate a dire need for providing more effective delivery services to Zimbabwean women.

In 2004, the MOHCW reported the major causes of maternal mortality in health facilities to be pre-eclampsia/eclampsia, haemorrhage and sepsis (NMHSZ 2004:34). A study on maternal mortality (MOHCW 2007:16) in urban and rural settings in Zimbabwe showed that the major causes of maternal mortality were HIV/AIDS (25.5%) and the second problem was haemorrhage (14.4%). It is more difficult to detect and manage these cases at home than in hospitals or clinics. Some women might not survive the referral chains from their homes to the district hospitals. Even if Zimbabwe’s hospitals might encounter a shortage of blood, properly trained midwives might be able to prevent cases of haemorrhage by adequately managing the birth processes and by monitoring the women after delivery. The administration of drugs and effective suturing and intravenous infusions might help to save some women’s lives. Trained midwives should also be able to summon medical help for suspected cases of post-partum haemorrhage (PPH). Traditional birth attendants, and other untrained persons like mothers and mothers-in-law, lack these skills and might be unable to obtain medical help timeously when required.

The “four toos” (starting child birth *too early*, getting pregnant *too closely*, falling pregnant *too many* times and falling pregnant when one is *too old*) have direct implications for teenage pregnancies, birth intervals, parity progression and menopausal pregnancies. More significantly, they provide a life-cycle perspective to the life-threatening circumstances that influence women’s lives, including choices of places to deliver their babies.

The “three delays” acknowledge that maternal mortality rates are influenced by the interaction of many factors, including the late recognition of the need for medical care, inaccessible health care facilities and the unavailability of skilled birth attendants at the first referral level (MOHCW 2004:11). The three delays model is normally used to explain the interaction among factors of maternal mortality in low income countries (MOHCW 2009:21). The delivery location might be a result of the first and second delays, namely failure to recognise the need for medical care, inaccessible health facilities and the woman’s choice of a delivery site could contribute to these delays.

1.3 STATEMENT OF THE RESEARCH PROBLEM

In Zimbabwe, there has been an increase in the number of home deliveries, even among women who attend ANC clinics. This is demonstrated by the high ANC attendance rate of 96.4% for at least one ANC visit (NMHSZ 2004:13) compared to an institutional delivery rate of 65% for Zimbabwe (ZDHS 2010-2011:113). It is unknown why many women, who utilise ANC services and know about the benefits of institutional deliveries, do not deliver their babies at health care facilities in Zimbabwe.

Maternal and neonatal morbidity and mortality rates remain high at 960/100 000 and 31/1000 respectively (ZDHS 2010/2011:113, 99). In the Mutare District of Zimbabwe, 89.7% women use ANC services (MOHCW 2009:11).

However, only 50.5% (MOHCW 2009:13) of these women delivered their babies in health care institutions during 2006. Overall, 41.2% of women in rural Zimbabwe delivered their babies at home during 2005 (ZDHS 2005/2006:125), which showed an increase from 32% in 1999 (ZDHS 1999:123).

The problem is that many women (89.7%) in the Mutare District used ANC services, but 49.5% delivered their babies at home (MOHCW 2007:13) during 2006, although they were familiar with the health care facilities and with the advantages of institutional deliveries. The factors influencing women to deliver their babies at home, despite ANC attendance must be identified and addressed, to help reduce Zimbabwe's maternal mortality and morbidity rates.

1.4 AIM OF THE STUDY

1.4.1 Research purpose

The purpose of the study was to enable more women to use institutional delivery services in order to reduce the maternal and neonatal mortalities and morbidities in the Mutare district of Zimbabwe. Identifying and addressing factors influencing women's preferences for home deliveries, could enable health care authorities to address some shortcomings, enabling more women to use institutional delivery services.

1.4.2 Research objectives

The specific objectives of this study were to:

- identify reasons why pregnant women, who utilised ANC services in the Mutare District, did not deliver their babies at health care institutions

- identify what problems women encountered during home deliveries
- identify what complications were experienced by babies not born in health care institutions
- determine circumstances under which women, who used ANC services but did not deliver their babies at hospitals or clinics, would have considered institutional deliveries
- make recommendations to the health care authorities of Mutare District to enable more women to deliver their babies at health care institutions

1.4.3 Research questions

In order to meet the objectives, the following research questions needed to be answered:

- What factors influenced pregnant women, who used ANC services, not to deliver their babies at health care institutions?
- What types of problems did pregnant women encounter who delivered their babies outside health care institutions?
- What complications did the babies, not delivered in health care institutions, experience?
- Under what circumstances would the women who used ANC services, but did not deliver their babies at hospitals or clinics, have considered institutional deliveries?
- What recommendations can be made to enable more women to deliver their babies at health care institutions in the Mutare District of Zimbabwe?

1.5 SIGNIFICANCE OF THE STUDY

Deliveries at health care institutions, with skilled birth attendants, comprise one of the targets of the WHO Millennium Development Goal 5 (MDG 5) accepted by the

stakeholders during 2000 (WHO 2007b:3). Although 96.4% of Zimbabwe's pregnant women used ANC services, only 65% of births occurred in health care institutions (ZDHS 2010/2011:113) The study will therefore attempt to identify factors influencing women's decisions not to deliver their babies at hospitals or clinics, although they used ANC services, and to make recommendations to enable more women to utilise institutional delivery services in the Mutare District in future. There appears to be an information gap as to why women do not deliver their babies at health institutions, when they use ANC services at these institutions, which this study might help to address.

1.6 DEFINITIONS OF KEY TERMS

The key concepts used throughout this dissertation are defined and clarified so that the readers can share the author's understanding of these issues. The definition accepted for each concept, serves to indicate the meaning attributed to that concept during the course of the study and report writing.

1.6.1 Live birth

Any birth of a live neonate weighing at least 500 grams at or after at least 22 weeks' gestation (WHO 2005:11).

1.6.2 Maternal death

The death of a woman while pregnant or within 42 days of the end of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (MOHCW 2004b:4)

1.6.3 Maternal mortality rate (MMR)

MMR is a health indicator expressed as a ratio or rate within a country, or within an care institution. MMR is calculated as the number of maternal deaths during any one year

per 100 000 live births during the same year (WHO 1999:11).

1.6.4 Neonatal mortality rate (NMR)

A ratio expressing the number of deaths among children from birth up to but not including 28 days (after birth) divided by the number of live births reported during the same time period. The NMR is expressed per 1 000 live births (MOHCW 2009:4).

1.6.5 Neonatal death

The death of a neonate during the first seven days after birth provided that it weighed at least 500gms at birth or was born after at least 22 weeks' gestation (MOHCW 2004c:4).

1.6.6 Skilled midwifery attendance

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

1.6.7 Skilled birth attendant (SBA)

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

1.7 FOUNDATIONS OF THE STUDY

1.7.1 Theoretical framework

The Health Belief Model (HBM) has been adopted as a theoretical framework for contextualising this study. This model describes the influences affecting patients' health-

related decisions and actions.

Table 1.1: Key concepts and definitions of the Health Belief Model (HBM)

Concept	Definition	Application
Perceived susceptibility	One's beliefs regarding one's chances of getting a disease or condition.	Define population(s) at risk and their risk levels. Personalise risk based on a person's characteristics or behaviours. Align perceived susceptibility with an individual's actual risk.
Perceived severity	One's beliefs of how serious a condition and its consequences are	Specify consequences of the risk and the conditions.
Perceived benefits	One's beliefs in the efficacy of the advised action to reduce the risk or seriousness of the impact.	Define actions to take: how where, when; clarify the positive effects to be expected from actions.
Perceived barriers	One's beliefs about tangible and psychological costs of the advised action.	Identify and reduce perceived barriers by reassurance, correction of misinformation and assistance.
Cues to action	Strategies to activate one's "readiness" to take and sustain required actions	Provide information about implementation of actions, promote awareness and employ reminder systems.
Self efficacy	One's confidence in one's ability to implement and sustain the required action(s).	Provide relevant training and guidance for performing actions. Use progressive goal setting strategies. Give reinforcements verbally. Demonstrate the desired behaviours. Reduce anxiety.

Glanz, Rimer & Lewis (2005:50).

This model postulates that health seeking behaviour is influenced by a person's perceptions of the threat posed by a health problem and the value associated with actions aimed at reducing the threat. According to Glanz et al (2005:50), the major components of the of the HBM are:

- perceived susceptibility
- perceived severity
- perceived benefits
- perceived barriers
- cues to actions
- self-efficacy

1.7.2 Components of the Health Belief Model (HBM)

The HBM has three major components, namely

- individual perceptions
- modifying factors and
- variables affecting the likelihood of initiating and sustaining actions (Glanz et al 2005:52)

1.7.2.1 Individual perceptions

Onega (2000:271-275), as well as Glanz et al (2005:52) outline individual perceptions as a person's beliefs about his/her own susceptibility to disease plus the seriousness with which he/she views the perceived threat of an illness.

The process of giving birth itself might be complicated and the outcome might be different from the expectation. Fraser and Cooper (2001:167) maintain that every pregnancy and childbirth is a unique experience, because complications could occur or

social circumstances might change and become worse. Women's expectations and emotional responses during pregnancy and childbirth stem from a mixture of factors including theoretical knowledge, values and beliefs and the accumulation of past experiences which might influence the person's perception of risks.

Perceived vulnerability refers to the consideration of specific health problems as people think differently about how likely they are to be affected. For example a woman's personal perceptions about the susceptibility that she and/or her unborn/newborn child might be susceptible to complications requiring interventions by trained midwives, together with the seriousness with which she regards this possibility equals the perceived threat of potential complications of a home delivery.

Patients weigh up advantages and disadvantages of taking any particular course of action, without necessarily taking all the relevant considerations into account. Cues to action comprise a patient's beliefs which do not exist in a pre-packaged form. They are prompted or created by a number of stimuli and triggers (cues) such as physical sensations, what the granny said, or what they heard or what happened to other pregnant women.

1.7.2.2 Modifying factors

According to Glanz et al (2002:52) modifying factors such as demographic, socio-economic and structural variables might affect an individual's perceptions and thus indirectly influence health-related behaviours. Socio-demographic factors, especially educational status, could affect a person's perceptions of susceptibility to and severity of suffering ill effects resulting from certain actions. A person's perceived benefits, to be expected from following health-related behaviours as well as barriers to accessing and using specific health services, are also modified by socio-demographic factors.

In this study demographic factors such as age, marital status, parity, occupation and

level of education were investigated to identify their potential influences on women's decisions to deliver their babies at home despite having used ANC services. These socio-demographic factors could be classified as modifying factors according to the HBM, applied to women's decisions to deliver their babies either at home or at health care institutions.

Besides demographic factors, women's knowledge acquired at ANC clinics and other variables (personality, social class, ethnicity and peer pressure) were also investigated because they could modify an individual woman's preferred place for delivering her baby (Onega 2000:271).

1.7.2.3 Variables affecting the likelihood of initiating actions

Variables affecting the likelihood of initiating actions include a person's perceived benefits of actions minus his/her perceived barriers to accomplish those actions. This equation will equal the likelihood that the person will take the action(s) to change his/her behaviour (Naidoo & Wills 2000:222). The perceived cost is also considered before any action is taken. Other factors to be considered include personal experiences, the ability to control the situation and an idea that the illness or danger is serious and might be lethal. However, some people might have an unrealistic optimism that 'it won't happen to me' (Naidoo & Wills 2000:224). Perceived seriousness refers to persons' beliefs about the consequences of contracting a particular illness, or of suffering serious consequences if left untreated.

Applied to this study, the HBM's variables affecting the likelihood of initiating action could be described as the women's perceived benefits of institutional delivery MINUS her perceived barriers to accomplishing an institutional delivery EQUALS the likelihood that she will take action to deliver her baby in a health care institution (rather than at home).

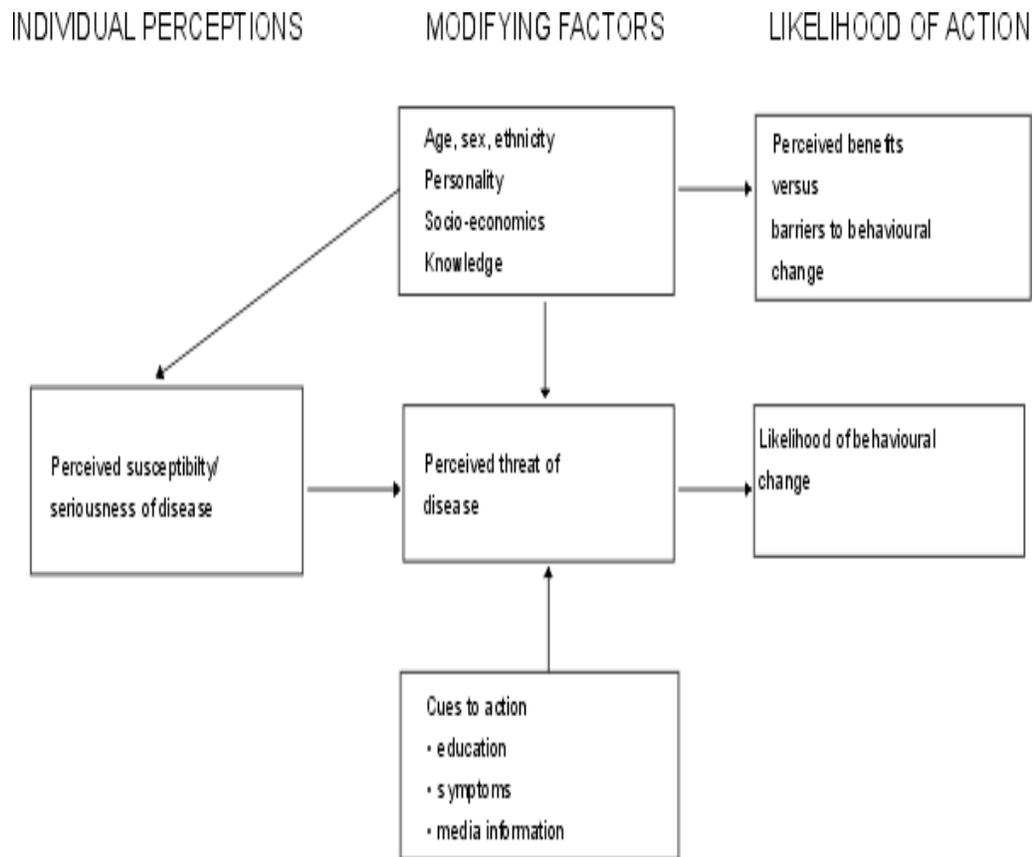


Figure 1.1: The Health Belief Model's major constructs (Source: Glanz et al 2005:52)

1.7.3 Application of the Health Belief Model (HBM) to investigate factors influencing women's preferences for home deliveries in the Mutare district of Zimbabwe

The HBM has been used to explain both the implementation (often requiring changed behaviours) and the maintenance of health-related behaviours. It has also been used as a guiding framework to contextualise people's health-related behaviours and provides a

framework for health-related interventions and for studies focusing on patient compliance and preventive health care practices (Polit & Hungler 1999: 128) The HBM has been summarised by Onega (2000:271) as "... a value expectancy theory with the desire to avoid illness or to get well and the belief that a specific health action is available to a person would prevent or ameliorate illness (expectancy)".

The HBM is based on the underlying assumption that the pregnant woman's choice of place for delivering her baby is a function of diverse factors. The study will try to identify factors which could influence women's decisions not to deliver their babies at health care institutions. The HBM presents a theoretical overview of the factors that might influence women's choices of places to deliver their babies.

1.8 RESEARCH DESIGN AND METHOD

This is an exploratory, quantitative, descriptive, cross sectional study investigating reasons why pregnant women, who utilised ANC services, did not deliver their babies at health care institutions in the Mutare district of Zimbabwe.

Mouton (2001:55) defines a research design as a plan or blue print of how one intends to conduct an investigation. According to Burns and Grove (2001:223) the design guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal.

1.8.1 Quantitative research

A quantitative design will be used to conduct this study because the researcher will use deductive reasoning to generate hunches that are tested in the real world. "The researcher applies a scientific approach to the study of a question of interest by moving in a systematic fashion from the definition of a problem and the selection of concepts on which to focus, through the design of the study and collection of information, to suggesting recommendations for solving of the problem" (Polit & Hungler 2004:12). The

researcher also controls the study by imposing conditions on, and setting criteria for the research situation so that biases are minimised. The information gathered is quantitative implying that it is numeric information that can be analysed with statistical procedures (Polit & Hungler 2004:13). This study will gather quantitative information on why women did not deliver their babies at health care institutions in the Mutare District after having used ANC services, using structured interviews. The data will be analysed using descriptive statistics. Quantitative analysis will be used which involves the "... manipulation of numerical data through statistical procedures for the purpose of describing phenomena or assessing the magnitude and reliability of relationships among them" (Polit & Hungler 1999:552-553).

Together with graphic analyses, descriptive statistics form the basis of quantitative data analysis (Burns & Grove 2001:494). The help of a statistician was obtained and the Epi Info version 3.5.3 program was used for the statistical analyses to test the significance of identified relationships.

1.8.2 Descriptive studies

When a study is not structured formally as an analytical or experimental study, when it is not aimed specifically to test a hypothesis, it is called a descriptive study (WHO 2001a:16). The "purpose of descriptive studies is to observe, describe and document aspects of a situation as they occur naturally, sometimes as a starting point for hypothesis generation or theory development" (Burns & Grove 2001:268). This study adopted a descriptive approach because it aimed to identify and describe reasons why women, who utilised ANC services, did not deliver their babies at health care institutions in the Mutare District of Zimbabwe.

1.8.3 Cross-sectional studies

Cross-sectional studies entail the collection of data on a cross-section of the population, which may comprise the whole population or a sample. Such data provide a picture of the real situation at a particular point in time (point prevalence) or over a period of time (period prevalence) (WHO: 2001a:17).

1.8.4 Exploratory studies

“Exploratory studies are not intended for generalization to large populations. They are designed to increase the knowledge of the field of study” (Burns & Grove 2001:374). This study attempted to explore the reasons why women, who used ANC services, did not deliver their babies in hospitals or clinics.

1.9 SCOPE AND LIMITATIONS OF THE STUDY

Although measures were be taken to minimise errors through using structured instruments and training data collectors, the information obtained might be vulnerable to interviewer, and interviewee distortions and biases. Another limitation is that being a cross-sectional study, the state of affairs found on the day of a specific visit might have been influenced by recent special activities or events in the Mutare District and might be irrelevant to the usual circumstances at the data collection sites.

The major limitation of the study is its geographical coverage of one district out of Zimbabwe’s 63 districts. The Mutare District only covers 2% of the total geographical area. However, as Manicaland is the most populous province in Zimbabwe, the population coverage index might be higher than reflected by the geographical coverage. The focus of this study is to identify factors that influenced women, who utilised ANC services, not to deliver their babies in health care institutions in the Mutare District. The major purpose of this study will be to use knowledge about factors influencing women not to deliver their babies at health care institutions, despite using ANC services, to enable more women to deliver their babies at these institutions in future. More institutional deliveries might help to reduce the maternal and neonatal mortality and

morbidity figures in this district.

1.10 STRUCTURE OF THE DISSERTATION

This dissertation comprises the following five chapters:

Chapter 1: Introduction and background information

Chapter 2: Literature review

Chapter 3: Research methodology

Chapter 4: Analysis and discussion of research results

Chapter 5: Conclusions, limitations and recommendations

1.11 SUMMARY

This first chapter of the dissertation covered the research methodology followed in this study. The study design, study population, sample selection procedures, research instrument, data collection procedures, ethical considerations, study limitations and data analysis procedures were introduced. Chapter 2 will provide an overview of reviewed literature relevant to factors that might influence women's preferences for home deliveries.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

According to Polit and Hungler (1991:648), a literature review is the scanning through existing literature that is relevant to the studied problem. This involves searching for information and ideas from what has previously been reported. It also involves reviewing the research methodologies adopted by different studies and selecting a suitable method for studying one's current research problem.

Chapter two reviews literature pertaining to the factors influencing women's decisions to deliver their babies at health care institutions or at home. The literature review will cover published and unpublished reports according to the three major components of the HBM, which are individual perceptions, modifying factors and variables affecting the likelihood of initiating actions (Onega 2000:271). This literature review will be conducted in an attempt to identify potential factors influencing women's preferences for home deliveries. The literature review will be presented using the following headings:

- individual perceptions of women concerning their preferred places to deliver their babies
- modifying factors which could influence women's choice to deliver their babies at home

- demographic factors such as age, race and gender which could influence women's choice of places to deliver their babies
- socio-psychological variables (such as personality, social class and peer pressure) influencing women's choices for places to deliver their babies
- structural variables including women's knowledge about disadvantages of not delivering their babies in hospitals or clinics and their previous experiences of home and/or institutional deliveries
- variables affecting the likelihood of women to initiate actions to deliver their babies at home (the perceived benefits of institutional deliveries, barriers to be overcome in order to deliver their babies in health institutions and the likelihood to select health institutions for future deliveries).

2.2 WOMEN'S INDIVIDUAL PERCEPTIONS CONCERNING THEIR PREFERRED PLACES TO DELIVER THEIR BABIES

According to the ZDHS (2010/2011:113), proper medical attention and hygienic conditions during delivery can reduce the risks of complications and infections that contribute to maternal and infant mortality and morbidity rates. Chaibva, Ehlers and Roos (2009:39) reported that in Bulawayo in Zimbabwe, pregnant adolescents' knowledge about ANC was a significant predictor of initiating ANC care, continued ANC attendance and delivering their babies in hospitals/clinics. The situation appears to be different in the Mutare District where most women (89.7%) used ANC services but 49.5% did not deliver their babies at health care institutions (MOHCW 2009:13).

2.3 MODIFYING FACTORS WHICH COULD INFLUENCE WOMEN'S CHOICES OF HOME VERSUS INSTITUTIONAL DELIVERIES

Issues which could modify women's choice of institutional versus home deliveries of their babies include demographic, socio-psychological and structural factors.

2.3.1 Demographic factors.

Issues discussed under demographic factors include age, gender, educational status and cultural issues.

2.3.1.1 Age

According to the ZDHS 2010/2011 women aged 20-34 are slightly more likely to deliver their babies in health care institutions (66%) compared to younger (64%) and older (61%) women. Age is especially important in cases of adolescent pregnancies and in first pregnancies because it is unknown whether the woman will be able to go through the delivery process safely (Fraser & Cooper 2003:175. The immature development of teenagers' bodies, might render them more susceptible to obstetric complications, and their babies might be small at birth requiring institutional care. Fear of institutions and ignorance about the risks of home births might contribute to young women's preferences for home deliveries.

Women older than 35 years of age are at greater risk of dying from obstetric complications than younger women in South Africa (Department of Health [DOH] 2001:16) It is thus also important that these older women should be encouraged to deliver their babies at health care institutions. According to the WHO (2007b:9), the fertility rate in SSA ranges from 7.7 children per women in Niger to 2.0 in Mauritius. Some women continue giving birth even in their 40s, requiring specialised obstetric care. Women of advanced maternal age (older than 35), in Finland, are reportedly more likely (than younger women) to experience pre-eclampsia, terminations of their pregnancies, diabetes, hypertension and caesarian sections. These women's newborn babies are more likely to be born before 37 weeks' gestation, to be small for their gestation age, and to have low Apgar scores (Lamminpaa, Vehvilainene-Julkunen, Gissler & Heinonen, 2012:47). Thus advanced maternal age is associated with higher obstetric risks for the pregnant woman and neonatal risks for the newborn infant. These increased risks emphasise the importance that women of advanced maternal age should deliver their babies at health care institutions, and not at home.

Age is often presented as a proxy for accumulated experience, including the use of health services. Older women are also possibly more confident and influential in household decision-making than younger women and adolescents. Older women should be informed by nurses/midwives to deliver their babies in hospitals/clinics since older age is a biological obstetric risk factor. However, older women might belong to more traditional cohorts, preferring home births, and might thus be less likely to use health care facilities than younger women.

2.3.1.2 Race

Cultural issues that affect childbearing practices might overlap with racial issues. However, research reports specific to women's preferences for home births, after attending ANC in the Mutare district, could not be found from the literature reviewed.

2.3.1.3 Gender issues

Gender implies social and cultural roles and patterns and options for men and women based on being male or female. High levels of maternal mortality are associated with areas where gender inequality is marked (United Nations Family Planning Association [UNFPA] 2008:16) and where women have limited decision making powers.

The various dimensions of autonomy, such as position in the household, financial independence, mobility and decision-making power regarding one's own health care, might impact on the utilisation of health care services, including obstetric services. Traditional Zimbabwean women cannot decide on their own to seek health care, but have to seek permission from the husband or mother-in-law (Mugweni, Ehlers & Roos 2008:33). Furthermore, women might lack control over material resources to pay for health care expenses and travelling. Women's mobility might be restricted or they might lack access to vehicles, bicycles or donkeys. However, women's informal power in the household might mitigate some of these barriers to accessing health care. According to the United Nations Children's Emergency Fund (UNICEF 2009:36) gender

discrimination in accessing education and health care and the general lack of control over health care, economic resources and reproductive decisions, increase women's risks of dying during pregnancy and childbirth.

2.3.1.4 Educational status

According to UNICEF (2009:36), women's empowerment begins with education. "Maternal education is consistently and strongly associated with all types of health behaviour. These include increased knowledge of the benefits of preventive health care and awareness of health services, higher receptivity to new health-related information, socialisation to interact with formal services outside the home environment, familiarity with modern medical culture, access to financial resources and health insurance, more control over resources within the household and wiser spending, more egalitarian relationships and better communication with their husbands, more decision-making powers, increased self-worth and self-confidence, better coping abilities and negotiating skills as well as a reduced power differential towards health care providers and thus better communication and ability to demand adequate services" (UNICEF 2009:36).

Education also reflects a woman's childhood background, including familiarity with health care services and health-related beliefs and norms. It has also been suggested that there might be community effects of education, with more highly educated communities organising themselves and demanding better public services and prioritising health on the political agenda. By contrast, better awareness of poor quality health care services, rendered by specific health facilities, and a higher level of confidence in one's ability to render self-care, might delay care-seeking behaviours among educated women or they might decide not to return for delivering their babies at clinics or hospitals after their ANC visits (UNICEF 2009:36).

Data analysed from demographic health surveys of three African countries (Chad, Mali and Niger) indicated that "...47% of mothers in Chad, 12% in Mali and 36% in Niger did not attend either ANC or EPI [expanded programme on immunisation] services.

Region, mother's education or partner's education were predictors of non-attendance in all three countries. Wealth index, ethnicity, and occupation were associated with non-attendance in Mali and Niger" (Carlson 2011:1). A study conducted in Uganda, reported similar findings because household heads (of whom 93.4% were men) influenced women's decisions to use health care, including institutional delivery, services. In this study men with secondary or higher education levels were significantly more likely to encourage their wives to use SBA services, than men with primary or no education (Vallieres, Hansen, McAuliffe, Cassidy, Owora, Kappler & Gathuru 2013:48).

2.3.1.5 Cultural factors

Cultural accessibility of maternal care refers to a situation where a proportion of pregnant women in a catchment area can independently choose and afford to go to a health facility for maternity services or treatment. Cultural acceptability considers the scenario where women are satisfied with the services being offered (WHO 2000:254).

Both demographic and socio-economic determinants influence the use of reproductive health care. However, such use is mediated by cultural influences on health-seeking behaviours that shape the way individuals perceive their own health and the available health services (Stephenson et al 2006:84-93). Pregnant women in the Marondera District of Zimbabwe were reportedly expected to deliver their babies at the houses of their mothers-in-law (Mugweni et al 2008:13). This was a Shona cultural expectation so that the mother-in-law could testify that the new born baby really belonged to the husband's family. Although no supporting literature could be found, this might also be the case in the Mutare District of Zimbabwe, as most people in this district also belong to the Shona culture.

Marital status might influence women's choices of delivery places, because the woman's marital status might influence her level of female autonomy and her financial resources. Single or divorced women might be poorer than married women, but enjoy greater decision making autonomy than their married counterparts. Young single mothers might be cared for by their families that might encourage skilled attendance,

especially for a first birth. On the other hand, single mothers might be stigmatised and might thus prefer to deliver their babies at home because they might anticipate negative provider-patient interactions or they might have experienced such interactions when they attended ANC clinics.

Women in some cultures might avoid health facilities when delivering their babies because of cultural requirements for seclusion in the household during this time of "pollution" or because of specific requirements around the delivery position, warmth, and handling of the placenta. In some cultural groups in Zimbabwe, the belief that obstructed labour is due to infidelity hinders care-seeking. Beliefs that birth is a test of endurance, and care-seeking a sign of weakness might be another reason for delivering at home even though these women might have attended ANC clinics (Stephenson, Baschieri, Clements, Hennink and Madise 2006:96;84).

2.3.2 Socio-psychological variables

Socio-psychological variables which could affect women's decisions to deliver their babies at home or at health care institutions include personality, social class and economic status as well as peer pressure. In West Sumatra, Indonesia, lower income families followed traditional beliefs and preferred traditional birth attendants' services to those of midwives (Angus & Horiuchi 2012:1).

2.3.2.1 Personality

No personality factors which could prevent women, who attended ANC clinics, from delivering their babies at health facilities in the Mutare District could be identified from the literature reviewed. Should any personality factors which could affect women's choice as to the place of delivering their babies, become apparent during the data collection phase, these aspects will be reported in chapter 4 of this dissertation.

2.3.2.2 Social class and economic status

Poverty is one of the main problems for most women. They might be offered free health services but might be unable to pay for transportation from home to the health facilities (Naude & Swetse 2000:27). In Zimbabwe, there is a policy that all maternity services are free till the child is five years old but in reality the women have to pay user fees, pay for transport to reach the ANC clinics, delivery and post natal services (MOHCW 2008:1). Poor women, unable to pay even small amounts of money for services, are more likely to delay seeking care in emergency situations and also more likely to deliver at home without skilled care and assistance (UNICEF 2009:35).

Women from the richest households are almost five times more likely to use health care facilities for child birth than women from poorer households. Poverty is an important factor influencing pregnancy outcomes among women in different parts of the world. “A pregnant woman who is suffering economically may also suffer physically.... For a woman in the developing world, the average lifetime risk of dying of a pregnancy-related cause is between 1:76 compared to an average lifetime risk of 1:8 000 for a woman in the developed world” (UNICEF 2008:7). In Kenya, it was reported that: “Physical access to health facilities through distance and/or lack of transport, and economic considerations are important barriers to women to delivering in a health facility...” (Kitui, Lewis & Davey 2013:1).

2.3.2.3 Peer pressure

According to the ZDHS (2010/2011:13) the national average for home deliveries was 32%, indicating that “safe assisted delivery” services were not used by these women. Home births are popular in some developed countries such as Sweden and the Netherlands, as well as in developing countries where giving birth is seen as a natural process which does not require medical intervention (Borak & Stein 1993:342). However, in these countries women are assessed during their ANC visits and trained midwives or other assistants are usually available. Selective home deliveries would be feasible for uncomplicated deliveries if transport were available, which is not the case in

the Mutare District of Zimbabwe. Thus institutional deliveries should be encouraged in this district.

Skilled attendance at childbirth is crucial for decreasing maternal and neonatal mortality and morbidity rates (Crowe et al 2012). The most important functions of basic essential obstetric care include:

- Administering parenteral antibiotics
- Administering uterotonic drugs (such as oxytocin, misoprostol)
- Administer parenteral anti-convulsants (magnesium sulphate)
- Performing manual removal of placentas, if necessary
- Removing of retained products of conception, if required
- Performing assisted vaginal deliveries (vacuum assisted delivery)
- Performing neonatal resuscitation (with ambu bag and mask)
- Replacing blood loss
- Resuscitating the newborn infant

According to Nilses, Nystrom, Munjanja and Lundmark (1997:97) only 15% of the Zimbabwean women who participated in their study delivered their babies at home. The question to ask is why, 13 years later, this percentage of home deliveries in Zimbabwe increased to 35% (ZDHS 2010/2011) while 94% of the pregnant women used ANC services. It is envisaged that the current research project might contribute some data towards answering this question (Crowe et al 2012).

2.3.3 Structural variables

2.3.3.1 Knowledge about safe assisted deliveries

Attending ANC clinics avails the opportunity of promoting healthy behaviours among these women and to increase their knowledge about pregnancy and its potential

complications. The WHO (2000:23) maintains that while some mothers are advised to deliver their babies at health care institutions during ANC visits, they might be constrained by their lack of knowledge about the potential problems for themselves and their babies should they encounter obstetric problems while delivering their babies.

Crowther (1996:182) reported that retrospective analysis of MMR at Harare's Central Hospital (in Zimbabwe), revealed that women who did not attend ANC, had an almost 15 times greater chance of dying during childbirth than women who attended ANC clinics. However, even women who attended ANC clinics and failed to deliver their babies at health care facilities might put themselves and their babies at undue risk of mortality or morbidity which could be reduced by delivering their babies at health care institutions.

Specific knowledge about the risks of childbirth and the benefits of skilled attendance could increase preventive care-seeking, while recognition of danger signs and knowledge about available beneficial interventions should increase timely care-seeking actions for identified potential obstetric complications (ZDHS 2010/2011:109). Contact with a skilled attendant during ANC could increase a pregnant woman's knowledge about childbirth, if effective health education is provided. Specific knowledge might also be associated with the woman's general education level.

According to Fraser and Cooper (2003:255), an important aspect of ANC is health education. It should aim at increasing the pregnant woman's knowledge of physiological changes in pregnancy, possible complications to watch for and what to do in cases of such complications during pregnancy, correcting misconceptions and strengthening women's confidence. Mudokwenuy-Rawdon, Bezuidenhout and Ehlers (2003:19) identified the critical need for targeting health messages during ANC visits and assisting Zimbabwean women to understand these messages. According to Idris, Gwarzo and Shehu (2006:70) in their study on "determinants of place of delivery among semi-urban women in northern Nigeria" concluded that ANC attendance did not influence hospital delivery as 46% of the respondents, who had attended at least four ANC appointments,

delivered their babies at home. This study aimed to find out what information the women, who attended ANC in Mutare district of Zimbabwe, received and why they did not deliver their babies in health care institutions.

2.4 VARIABLES AFFECTING THE LIKELIHOOD OF WOMEN TO INITIATE ACTIONS TO DELIVER THEIR BABIES IN HEALTH CARE INSTITUTIONS

Perceived benefits and perceived barriers of institutional deliveries might influence women to continue delivering their babies at home even if they attended ANC clinics throughout their pregnancies.

2.4.1 Perceived benefits of actions

“The decision to obtain care for women with obstetric complications is determined by recognition of danger signs, perceived severity of illness, perceived aetiology and available quality of interventions.... The perception of a condition as normal or minor interacts with the possible overall cost of treatment and level of awareness of illness severity” (Mbizvo, Fawcus, Lindmark & Nystrom 1993:377). Women who might perceive the delivery of a baby to be a normal physiological process might be unlikely to select hospitals or clinics to deliver their babies, because they might associate hospitals and clinics with illness, not with normal physiological processes. Such women might benefit from health education emphasising the potential risks of pregnancy and childbirth and the treatments that could be implemented at clinics and hospitals to address such risk factors, but these facilities are not available in homes.

Perceived quality of care, which partly overlaps with medical quality of care, is an important factor influencing the utilisation of health care services. Assessment of the quality of services "largely depends on [people's] own experiences with the health system and those of people they know" (Gabrysch & Campbell 2009:9). Some elements, such as waiting times at health care institutions, can be measured objectively.

However, people's perceptions, as to whether issues are indeed problems that might affect the perceived quality of care, are more subjective. Elements of satisfaction with health care services include satisfaction with the outcomes, the interventions and the services received – including staff members' friendliness, the availability of supplies and waiting times. Perceptions are shaped by general awareness of the dangers of childbirth and interventions available at health facilities, by individuals' past experiences with pregnancy, childbirth and health services.

The fact that women in the Mutare District use ANC services shows some degree of recognition of the importance of skilled care during pregnancy. Why these women do not deliver their babies at health care institutions is what the researcher intended to unveil.

2.4.2 Perceived barriers to accomplishing health-related actions

Staff attitudes, as well as the accessibility and affordability of health services, could be perceived as barriers by pregnant women, preventing them from delivering their babies at health care institutions.

2.4.2.1 Staff attitudes

The competence of midwives in the health care delivery systems impact on their consumers' perceptions of these services. In Zimbabwe all nurses have been encouraged to take a one year post basic midwifery course within a few years of qualifying as a registered nurse by completing a three year course. This is because maternal-child health constitutes the bulk of the health care rendered in the country. Midwives, who portray negative attitudes towards women, fail to respect the women and thus also fail to involve them in active decision making concerning the safe delivery of their babies. This situation might be aggravated by poor staff attitudes. Poor socio-economic status, accompanied by comprehension difficulties, might influence women not to use ANC services and/or to deliver their babies at home.

“Health services that are available may be viewed as alien.... Clients are out of their realm and feel uncomfortable with the staff. Providers are often viewed as belittling their clients, talking above them...” (Levine 1994:120). Other authors have reported disconcerting behaviours from nurses and midwives in South Africa. “Nurses instruct each other to scold and insult women. They leave patients alone and sleep” (Fonn, Xaba, Tint, Conco & Varkey 1998:697). Long waiting lines and the inability of PHC facilities to provide a combination of services on a given day contributed to low levels of utilisation of maternity services in South Africa (Fonn et al 1998:697). The Chronicle (August 2012:1) reported that nurses in a hospital in Bulawayo were beating patients for failing to progress fast enough during labour. Mugweni et al (2008:9) reported that many women were dissatisfied with the delivery services provided by nurses and midwives in the Marondera District of Zimbabwe, and about the nurses’/midwives’ poor attitudes towards women in labour.

It is unknown whether or not similar conditions prevailed at health care institutions in the Mutare District. Should such staff attitudes become apparent during the data collection phase of the current research project, these will be reported in chapter 4 of this dissertation.

2.4.2.2 Accessibility and affordability of health care services

The Alma Ata declaration of 1978 aimed to bring affordable and available health care as close as possible to where the people work and live. Included in the declaration is the principle of accessibility and affordability (Naude & Setswe 2000:2). Financial accessibility measures the extent to which people are able to pay for care. This is usually measured through community-based willingness and ability to pay for health services. According to the WHO (2000:254), employed women might use maternity services because they could afford to pay while unemployed women might be unable to pay for these services, and are thus also unable to use these services.

The WHO (2000:4) defined accessibility in much broader terms than merely physical distance. It includes poor roads which might be impassable at certain times of the year, infrequent or inconsistent public transport, financial constraints and non-availability of trained health care staff members.

In Zimbabwe, after the adoption of the PHC approach, the government built health facilities in various districts. According to the WHO (2000:32), about 85% of the Zimbabwean population lived within eight kilometers of a health care facility. This required patients/clients to visit the PHC level of care as the first point of entry into the health care system. They would then be referred to higher levels of health care facilities depending on the complexity of their conditions (WHO 2002:31).

Applied to midwifery services, midwives should refer pregnant women with obstetric problems or high-risk pregnancies to institutions rendering higher levels of health care than those provided at PHC clinics. However, if these women should choose to deliver their babies at home, they fail to access such specialised health care services, and might place their own and their babies' lives at undue risk of maternal and neonatal mortality and morbidity.

According to the MOHCW (2009:13), the Government of Zimbabwe abolished maternity fees in all government institutions to remove the economic barrier to accessing services. Most PHC centers in the Mutare district are public owned and are experiencing low institutional deliveries. Irrespective of this government directive, some health care institutions continued charging fees for maternity, ANC and post natal services of up to US\$150.00 (MOHCW 2009:9).

According to Mbizvo et al (1993:3376) the distance from health care facilities could influence MMR through extending the time required to reach the health facility, and due to the high cost of transport. Transport was frequently unavailable in Zimbabwe due to depletion of petroleum supplies during 2012 when this study's data collection took place. Inadequate numbers of staff at health facilities, particularly at the PHC clinics,

make it difficult to provide 24-hour services. These challenges discouraged Nigerian women, even when they had used ANC services, from seeking medical services when labour commenced (Gabrysch & Campbell 2009:93).

2.5 SUMMARY

In this chapter studies were reviewed pertaining to factors contributing to low institutional deliveries among women who used ANC services in different countries, and in Zimbabwe. The literature review was presented according to the major components of the HBM.

Chapter three will present the research methodology adopted by this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The data were collected by the researcher using a structured interview schedule specifically designed for this study, addressing only the variables of interest. The study followed a quantitative research methodology. This chapter presents the research design, the population and sample and sampling procedures, the research instrument, data collection and analysis procedures. Ethical issues are also addressed.

3.2 RESEARCH DESIGN

A research design is defined as the plan or blue print which stipulates how the researcher intends to collect the data. It also specifies of the operations to be performed in order to test a specific hypothesis under given conditions (Burns & Grove 2001:223).

This was an exploratory, quantitative, descriptive, cross-sectional study investigating reasons why pregnant women, who utilised ANC services, delivered their babies at home in the Mutare District within the six months preceding the structured interviews (conducted to obtain data for this study).

3.2.1 Quantitative study

A quantitative design was used to conduct this study. Under this approach, a scientist uses deductive reasoning to generate hunches that are tested in the real world. The researcher applies a scientific approach to the study of a question of interest by moving in a systematic fashion from the definition of a problem and the selection of concepts on which to focus, through the design of the study and collection of information, to

suggesting recommendations for solving of the problem (Polit & Hungler 2004:12). The researcher also controls the study by imposing conditions on the research situation so that bias is minimised.

Evidence in quantitative research is gathered according to a specified plan, using formal instruments to collect the needed information. The information gathered during this study, is quantitative implying that it is numeric information that can be analysed by using statistical procedures (Polit & Hungler 2004:13). This study gathered quantitative information, by conducting structured interviews, attempting to find out why women, who utilised ANC services, preferred to deliver their babies at home in the Mutare District.

Quantitative analysis was used involving the "... manipulation of numerical data through statistical procedures for the purpose of describing phenomena or assessing the magnitude and reliability of relationships among them" (Polit & Hungler 2005:552-553). Together with graphic analyses, descriptive statistics form the basis of quantitative analysis of data (Burns & Grove 2001:49). The help of a statistician was acquired and the Epi-info computer program was used for the statistical analyses to test the significance of identified relationships. MSEXcel was used to generate graphs and histograms to portray some findings visually.

3.2.2 Descriptive studies

"The purpose of descriptive studies is to observe, describe and document aspects of a situation as they occur naturally, sometimes as a starting point for hypothesis generation or theory development" (Burns & Grove 2001:268). This study adopted a descriptive approach because it attempted to identify and describe reasons why women, who utilised ANC services, did not deliver their babies at health care institutions in the Mutare District.

3.2.3 Cross-sectional studies

Cross-sectional studies entail the collection of data on a cross-section of the population, which could comprise the whole population or a sample. Such data provide a picture of the real situation at a particular point in time (point prevalence) or over a period of time (period prevalence) (WHO: 2001a:17).

This was an exploratory, quantitative descriptive study investigating reasons why pregnant women, who utilised ANC services, did not deliver their babies at health care institutions in the Mutare District of Zimbabwe.

3.3 RESEARCH METHOD

This section covers the exact steps that were followed during the data collection process. These include the research population, sample, sampling procedures, the research setting, and data analysis procedures.

3.3.1 Population, sampling procedures and sample

3.3.1.1 Population

Burns and Grove (2001:366) defined a population as a set of entities in which all measurements of interest to the study field are represented. The 43 health care facilities in the Mutare District comprised the population of possible study sites (health care institutions) for this study. The population for this study comprised all women who used ANC services, but who did not deliver their babies at health care institutions, in the Mutare District within the six months preceding the data collection phase.

3.3.1.2 Site sampling

Health care facilities in the Mutare District comprise the census frame (population) for the random selection of the participating sites. Out of a total of 43 health care institutions in the Mutare District, 10 sites were selected, using random sampling with replacement. The names of all 43 institutions were written on 43 slips of paper and placed into a glass container. A clinic nurse, who did not participate in this study in any other way, was requested to blindly draw a slip of paper from the container. This name was written down as a participating site and the slip of paper was returned to the container. This continued until 10 sites had been selected. In case the drawn name was the same as a previously selected site, another piece of paper was drawn. Ten (23.3%) randomly selected sites out of a total of 43 comprised the sample of study sites for this study.

3.3.1.3 Sampling of respondents

No census exists in Zimbabwe of women who attend ANC services but who do not deliver their babies at health care institutions (comprising the population for this study). Consequently, no such census existed in the Mutare District, random sampling of respondents was impossible.

Convenience non-random sampling was done to select women to be interviewed at each of the 10 study sites. Women, who used ANC services but who did not deliver their babies at hospitals or clinics, attending any one of these selected 10 sites, on the specific day when interviews were conducted at the health care facility concerned, were requested to participate in the study. The first 15 women who agreed to be interviewed at each of the 10 participating sites, were interviewed and comprised the non-random convenience sample of 150 women. In case any woman changed her mind and/or terminated the interview, this woman's decision was respected and another woman was requested to participate in her place.

The inclusion criteria for the respondents were, women who:

- were at least 18 years old
- used ANC services during their last pregnancies
- did not deliver their babies at health care institutions during the six months preceding the dates of their interviews (July and August 2012)
- attended the post natal or well-baby clinics at one of the 10 randomly selected participating sites on the day when interviews were conducted at the specific site
- lived in the Mutare District
- were willing to be interviewed and to sign an informed consent form
- understood English

The exclusion criteria referred to women who:

- were younger than 18 years of age
- did not attend post-natal or well-baby clinics at one of the participating health care sites on the days when interviews were conducted at the respective sites
- lived outside the Mutare District
- delivered their babies at health care institutions
- did not use ANC services
- did not understand English

3.3.2 Data collection

All people attend English medium schools in Zimbabwe. Consequently it was expected that the women selected for interviewing, would be able to understand English. However, the four trained assistants and the researcher spoke the local language (Shona) fluently and were able to translate any unfamiliar words. In such cases, the Shona words used would be indicated on the structured interview schedule by the interviewer.

Individual structured interviews were conducted to collect data. Open and closed ended questions were used to obtain demographic information and to identify factors that influenced women's decisions not to deliver their babies at health care institutions.

Four registered midwives were trained by the researcher to conduct the structured interviews. Their training emphasised the treating of all women with respect, obtaining informed consent and respecting women's rights to refuse to participate in the study. Actual interviews were conducted and interview schedules completed in a classroom situation until the four midwives were competent in conducting the interviews and in recording the findings on the interview schedules.

The four trained research assistants spent time at each site until they had conducted a total of 15 interviews with women, who attended ANC clinics but did not deliver their babies at health care institutions, during the six months preceding the dates of the interviews. The researcher was available at each site and monitored the completed interview schedules to identify and address shortcomings before the interviewed women left the site. The researcher was also available to render any required assistance before, during or after the interviews.

3.3.2.1 Development and testing of the data collection instrument

A structured interview schedule was designed by the researcher, based on findings from the literature review and was pre-tested on 10 patients. The four trained research assistants and the researcher conducted these 10 interviews while the researcher was available for consultation. No problems were identified during these 10 interviews. These five persons' findings revealed no marked differences. It was accepted that the four research assistants' information was similar to that of the researcher. No interrater coefficients were compiled. The researcher was available for consultation throughout all 10 interview sessions.

3.3.2.2 *The data collection instrument*

The interview schedule comprised seven sections.

Section 1 attempted to obtain the general information about the participants including their area of residence, date of ANC booking, total number of ANC visits, gestation stage at the first ANC visit and place of delivery (home versus TBA).

Section 2 focussed on socio-demographic data comprising six items including age, marital status, parity, gravidity, level of education and occupation of the respondents.

Section 3 tried to identify the participating women's perceptions and experiences of the maternity services rendered at hospitals and clinics in the Mutare District.

Section 4's three items addressed the respondents' perceptions concerning the affordability and accessibility of maternity services, especially delivery services, in the Mutare District.

Section 5's three items requested information about cultural practices that could influence women's choices to deliver their babies in health care institutions in the Mutare District, or not to do so.

Section 6 was divided into six parts attempting to elicit information about respondents' knowledge about safe assisted deliveries, obstetric danger signs, information provided by ANC clinics concerning newborn care, ability to identify potential complications during labour, the possession of an emergency home delivery kit and the contents of such a delivery kit.

Section 7 contained open ended questions attempting to obtain some indications as to what expectations of the institutional delivery services would encourage the

respondents to deliver their babies at health care institutions in the Mutare District in future.

3.3.2.3 Ethical considerations

Ethical clearance was granted by the Higher Degrees Committee of the Department of Health Studies, University of South Africa. Permission to conduct this study was granted by the Zimbabwe National Research Council. Permission was also granted by the Provincial Medical Director of Manicaland Province and the District Medical Officer of Mutare District. After obtaining permission from the Departmental Higher Degrees Committee of the Department of Health Studies, University of South Africa, the Provincial Medical Director of Manicaland and the District Medical Officers, the researcher had meetings with key people like the District Nursing Officer, community health nurses and the sisters in charge of the relevant institutions. This was to inform them about the study and to gain their cooperation and support.

According to De Vos (2002:63), ethics refer a set of moral principles that are suggested by an individual or group and are widely accepted, and offer rules and behavioural expectations about the most correct conduct towards respondents. According to Trochim and Donnelly (2006:8), the principle of voluntary participation requires that people should not be coerced into participating in any study. Closely related to the notion of voluntary participation is the requirement of informed consent. Essentially this means that prospective research respondents must be fully informed about the procedures and risks involved in the research and must give consent without coercion to participate. Ethical standards also require that researchers should not put participants in situations where they might be at risk of harm as a result of their participation. Harm can be defined as both physical and psychological (De Vos 2002:64). According to Burns and Grove (2001:200-201), researchers should guarantee confidentiality to participants by re-assuring them that no identifying information will be made available to anyone who is not directly involved in the study. The principle of anonymity, which

essentially means that the participant will remain anonymous throughout the study, should always be adhered to by researchers.

The principles of voluntary participation, informed consent, minimisation of harm, confidentiality and anonymity were strictly upheld in this study. The risk of harm was minimal because the study was non-invasive, involving only interviewing of respondents. However, the researcher was available at each site during the interviews and could attend to any interviewed woman who might have experienced psychological stress as a result of being interviewed. The researcher could also accompany such a woman to any relevant health care provider if the need should arise. Fortunately, this was not necessary.

The nature and potential benefits of the study were explained to each woman prior to being interviewed using an introductory letter, and requesting each respondent to sign a consent form indicating her willingness to be interviewed (Mouton 2001:239). No one was coerced to participate and the woman's decision to participate or not did not influence the nature of her health care in any manner whatsoever. Any potential respondent who changed her mind before, during or after the interview had the right to do so and this right was respected. Respondents were assured about anonymity as no names and no numbers or any identifying indications were recorded on any form. Each signed consent form was sealed in an envelope and placed into one sealed container. Each anonymously completed interview schedule was placed into another sealed container. In this way no one could link any completed interview schedule to any specific interviewee or to any specific signed consent form. The researcher kept the signed consent forms and completed interview schedules locked up in a safe place to ensure confidentiality. Only the researcher, the study's supervisor and the statistician had access to the completed interview schedules and to the data entered into the Epi Info program which could only be accessed by means of secure passwords known only to the researcher, supervisor and statistician. The completed interview schedules would be kept until the research report had been accepted by the authorities concerned.

No expenses were imposed on respondents as the women were interviewed while they waited to be seen by a health care worker at a clinic. Great care was taken to ensure that no interviewee lost her place in the waiting queue as a result of being interviewed. No incentive was offered to the interviewed women.

3.3.3 Data analysis

The Epi-Info computer program was used to analyse the data quantitatively, with the assistance of a statistician. Frequencies and percentages were used to summarise and describe the socio-demographic data. Where appropriate, women's preferences for home births were correlated with their age, parity, gravidity, education, income, distance from the nearest health delivery services, and the women's perceptions about the quality of delivery services rendered at these institutions. Tables, pie diagrams and bar graphs were used to display the results visually.

3.4 VALIDITY AND RELIABILITY

Internal validity is defined as "the extent to which the effects detected in the study are a true reflection of reality rather than being the result of the effect of extraneous variables" (Burns & Grove 2005:800). Validity of an instrument refers to "... the extent to which the instrument actually reflects the abstract construct being examined" (Burns & Grove 2001:814). Content validity, has been enhanced by obtaining inputs from the study's supervisor, and from four midwives working in ANC and delivery services. The items of the structured interview schedule were derived from the literature review and from the researcher's experiences of providing ANC and midwifery services in the Mutare District. All five persons consulted agreed that every item in the structured interview schedule appeared to be relevant to the purpose of the study (face validity) and was relevant for obtaining biographic information about the interviewees or about their reasons for not delivering their babies at health care facilities despite using ANC services (content-related validity). Content validity was further explored by comparing findings obtained in response to different items and no major discrepancies were found.

External validity refers to “the extent to which study findings can be generalised beyond the sample used in the study” (Burns & Grove 2005:798). The results of this study might not be generalisable to women beyond the non-representative sample without performing similar studies at other study sites.

Reliability refers to the consistency with which an instrument measures specific attributes (Burns & Grove, 2001:809). A pre-test was conducted by interviewing 10 respondents, who were excluded from the actual study. The researcher and the four trained interviewers each conducted two pre-test interviews. At a subsequent meeting of these five persons, the recorded responses were discussed and compared, but no marked differences were identified. No items proved problematic for the interviewees during the pretesting phase.

3.5 SUMMARY

This chapter described the research design and methods used to collect data about women’s reasons for not delivering their babies at health care facilities, although they had used ANC services in the Mutare District. The study utilised an exploratory, quantitative, cross-sectional, descriptive design.

Convenience non-random sampling was used to select 150 participants from all women attending post natal and well-baby clinics at the randomly selected 10 participating sites in the Mutare district. The women comprising the sample used ANC services but did not deliver their babies at health care institutions, during the six months preceding the data collection phase of this study (July and August 2012).

The next chapter will present the analysis and discussion of the data collected during the 150 structured interviews.

CHAPTER 4

ANALYSIS AND DISCUSSION OF THE FINDINGS

4.1 INTRODUCTION

This chapter presents the findings pertaining to the reasons why women, who attended ANC clinics in the Mutare District, did not deliver their babies at health care institutions, and to identify their perceptions and experiences of delivering their babies at home. Once these reasons could be known, then the health care institutions and planners might design means and ways of decreasing the number of home deliveries in the Mutare District in order to reduce the maternal and infant mortality and morbidity rates in this area - and possibly also in other rural areas throughout Zimbabwe.

In order to meet the objectives, the following research questions needed to be answered:

- What factors influenced pregnant women, who used ANC services, not to deliver their babies at health care institutions?
- What types of problems did pregnant women encounter who delivered their babies outside health care institutions?
- What complications did the babies, delivered outside health care institutions, experience?
- Under what circumstances would the women who used ANC services, but did not deliver their babies at hospitals or clinics, have considered institutional deliveries?
- What recommendations can be made to enable more women to deliver their babies at health care institutions in the Mutare District?

4.2 RESEARCH FINDINGS

The interview schedule's seven sections will be followed in analysing and discussing the data:

Section 1 – General information

Section 2 – Socio-demographic factors

Section 3 – Perceptions/experiences of women concerning their levels of satisfaction with maternity services in the Mutare district of Zimbabwe

Section 4 – Affordability/accessibility of delivery services

Section 5 – Socio-cultural factors influencing women's decisions to deliver their babies at home

Section 6 – Knowledge about safe assisted deliveries

Section 7 – Women's knowledge about home versus institutional deliveries

As 150 women were interviewed, the total number of responses will be indicated as N=150. In cases where fewer than 150 women answered a specific item, such total numbers of responses will be indicated by n, and subtotals will be indicated by *f*.

4.2.1 General Information

Aspects discussed under this section include the places where the women actually delivered their babies, the ages of the respondents and the number of ANC visits of these women.

4.2.1.1 *Places where respondents delivered their babies*

The total number of women who participated in the study was 150 (N=150), of whom

- 46.7% (*f*=70) delivered at their own homes
- 16.6% (*f*=25) delivered at their parents' homes
- 15.3% (*f*=23) delivered at the homes of their parents-in-law
- 15.3% (*f*=23) delivered at TBAs' homes and
- 6.3% (*f*=9) delivered on their way to hospital (indicated as 'other' places' in figure 4.1.

Figure 4.1 summarises data obtained from the structured interviews conducted with 150 women, who attended ANC clinics, but who did not deliver their babies at health care institutions.

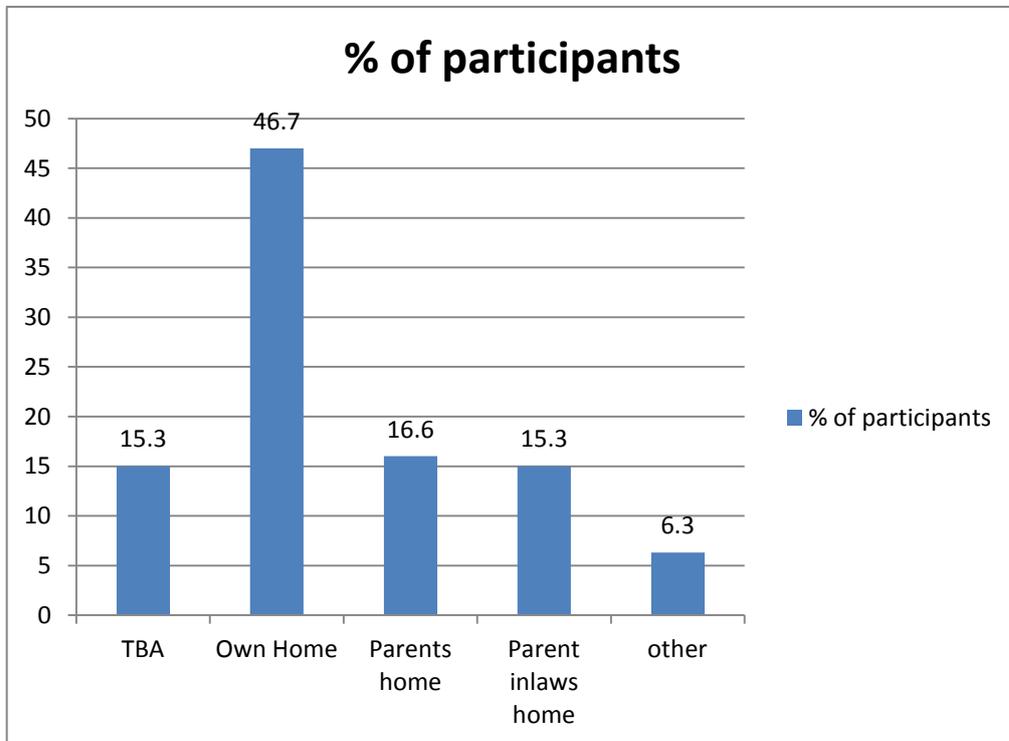


Figure 4.1 Places where respondents' babies were delivered (N=150)

Out of the 150 respondents, 70 (46.7%) delivered their babies at the women's own homes followed by the homes of their own parents (16.6%; n=25) and the homes of the women's parents-in-law (15.3%; n=23). Deliveries at parents' homes could have been influenced by cultural practices known as Masungiro where a married woman is expected to deliver her first baby at her parents' home where she will be given some African herbs before and after delivery. Only 15.3% ($f = 23$) of the women delivered at TBAs' homes.

4.1.1.2 Antenatal clinic visits

The number of ANC visits is reflected in table 4.1 while table 4.2 indicates the women's gestation periods at their initial ANC visits. Table 4.1 indicates

that the maximum number of ANC visits was eight. The median number of visits was three and the most frequent number of visits (mode) was one, contrary to the recommended (MOHCW's 2008:27) ideal number of four ANC visits according to Zimbabwe's focus-oriented ANC policy. This shows that the majority of respondents in this study did not adhere to Zimbabwe's focus-oriented ANC protocol, recommending four ANC visits.

Table 4.1 Respondents' total number of ANC visits (N=150)

Number of ANC visits	Frequency	Percentage
1	38	25.3
2	35	23.3
3	37	24.7
4	24	16.0
5	7	4.7
6	3	2.0
7	4	2.7
8	2	1.3
Total	150	100.0

The WHO (1999:6) recommends that women should commence their ANC visits early during their pregnancies, before 12 weeks' gestation. Zimbabwe adopted an evidenced-based ANC protocol since 1996, focusing on a minimalist approach to ANC, but recommending a minimum of four visits and commencing ANC visits during the first trimester of pregnancy.

Table 4.2 Gestation period at first ANC visit (N=150)

Gestation in weeks	Pregnant women's ages			Total	%
	<=25 years	26-34 years	>=35 years		
<= 12	2	4	1	7	4.7
13-28	42	41	20	103	68.7
29-35	13	8	8	29	19.3
>36	3	6	2	11	7.4
Total	60	59	31	150	100.1

Table 4.2 provides information about the gestation stage at the respondents' initial ANC visits. As many as 68.7% ($f=103$) paid their initial ANC visits during the second trimester, 19.3% ($f=29$) during the third trimester and only 4.7% ($f=7$) during the first trimester. The MOHCW (2008:27) recommends that the initial visit should take place before 12 weeks' gestation or during the first trimester. The early initiation of ANC attendance is important to provide PMTCT services, prevent and treat anaemia, to screen for and treat syphilis and to identify and manage women with obstetric and/or medical conditions. Commencing ANC early during pregnancy allows for the development of interpersonal relationships between the midwife and the pregnant women as well as the development of a delivery plan (WHO 2007a:3).

4.2.2 Summary of socio demographic factors

Table 4.3 Socio-demographic factors (N=150)

Demographics (N=150)	Category	Frequency	Percentage (%)
Age	18-25	60	40.0
	26-34	59	39.3
	>35	31	20.7
Occupation	Employed	29	19.3
	Self employed	16	10.6
	Farm worker	6	4.0
	Unemployed	90	60.0
Marital status	Peasant farmer	9	6.0
	Married	114	76.0
	Never married	26	17.3
	Widowed	3	2.0
Education level	Divorced	7	4.7
	None	11	7.3
	Primary	51	34.0
	Secondary	53	35.3
	High School	22	14.7
	Tertiary	13	8.7

The socio-demographic information (table 4.3) helps to contextualise the findings pertaining to the women's preferences not to deliver their babies at health care facilities, in spite of having utilised ANC services.

4.2.2.1 Respondents' marital status

Figure 4.2 portrays the marital status of the respondents, indicating that most women (76.0%; $f=114$) were married. The implication might be that these women's husbands and/or families-in-law could exercise some influence over their decisions not to deliver their babies at hospitals or clinics. Only 17.3% ($f=26$) were never married, 4.7% ($f=7$) were divorced and 2.0% ($f=3$) were widows.

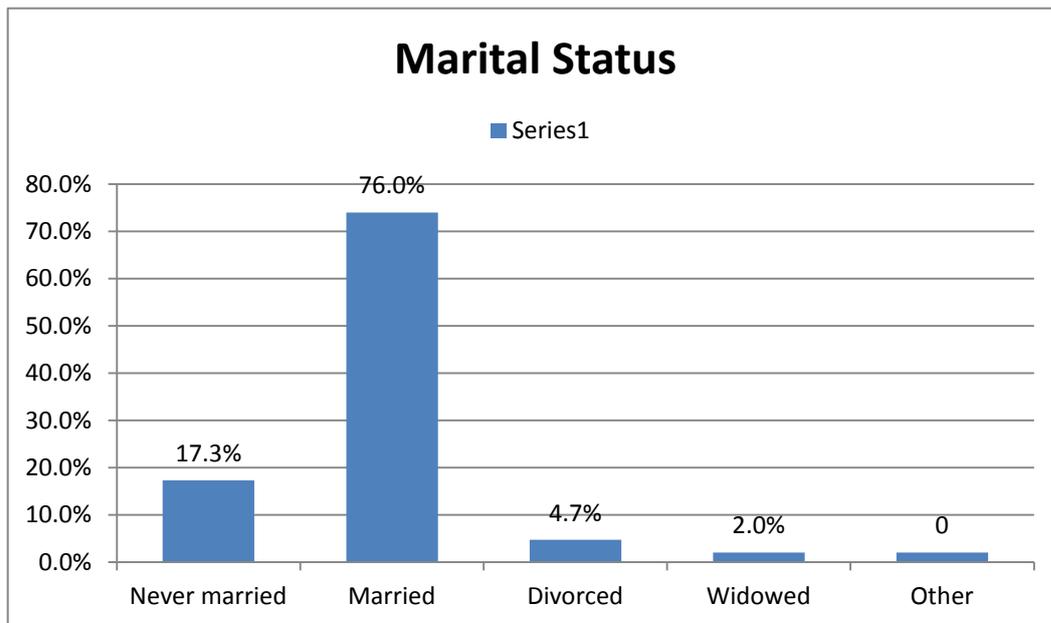


Figure 4.2 Respondents' marital status (N=150)

The fact that most respondents were married, could be a positive factor since all women need psychosocial support during pregnancy, delivery and in the post-partum period. The Shona culture continues to disapprove of pregnancies out-of-wedlock (Mugweni et al 2008:10). Thus some respondents might have indicated that they were married when this was not the case.

4.2.2.2 Respondents' ages

The youngest respondent was 18 years old and the oldest respondent was 45 years old. Pregnant women aged 18 or 19 are treated as pregnant adolescents in Zimbabwe. The median age of the women was 28, implying that 50% of the women were older and 50% were younger than 28 years of age. As many as 31 (20.7%) women were 35 years of age or older. The UNFPA (2008:8) maintains that an adolescent pregnancy is a crisis situation as it is complicated by factors like interrupted developmental tasks, immature physical development, interrupted education or career pursuits, and lack of family acceptance or paternal support complicated by increased medical risks during pregnancy and by the premature assumption of adult responsibilities such as the raising of children – often premature babies - at this young maternal age. The immature physique of adolescents might cause obstetric emergencies and these women should deliver their babies at health care facilities (Chaibva et al 2009:33).

Women, aged 35 and older, should deliver their babies in hospitals or clinics, because these older women are more prone to encountering obstetric emergencies than their younger counterparts. Bennett and Brown (2001:214) maintained that if the maternal age exceeds 35, the pregnant woman should be regarded as falling within a high risk age group. Respondents, whose ages exceeded 35, especially if coupled with parity five or greater, posed increased risks of perinatal mortality, obstetrical complications, including post-partum haemorrhage. Ideally these women should give birth at an institution which allows for transfer to a secondary or tertiary health care institution equipped to deal with potential complications and emergencies (WHO 2007b:15). Such timely referrals could help to reduce the maternal and infant mortality and morbidity rates. However, if women fail to deliver at health care institutions, they might be unable to make use of timely referrals to health care institutions, rendering the required care that might save these women's and/or their new born babies' lives and/or prevent maternal and/or neonatal morbidities.

4.2.2.3 Respondents' levels of education

Table 4.3 indicates that 51 (34.0%) of the respondents had only primary school education, while 88 (58.7%) had completed secondary school, high school and tertiary education. This high level of education of the Zimbabwean women, who participated in this study, could be considered to be a major achievement of the education thrust by the Government of Zimbabwe. The adult literacy rate rose from 50% in 1980 to the commendable 95% in 2011 (ZDHS 2010/2011:31). Within this high level of education, the respondents should be in a better position to make informed choices with regard to the place of delivery if the relevant information is available to them. The information required for making an informed decision about the place of delivery should be obtained from the ANC services.

Stephenson et al (2006: 86) remarked that higher levels of education influence service use by increasing female decision making powers and by increasing their awareness of the benefits of using health services. If this assumption is applied to the current study, then at least 58.7% ($f=88$) of these respondents should have been capable of understanding the necessity for delivering their babies at hospitals and clinics. However, this study did not try to ascertain the educational levels of the respondents' husbands or the heads of their households. Vallieres et al (2013:1) found that the lack of education of household heads in Uganda posed a barrier to women's utilisation of delivery services at health care institutions. It could not be ascertained whether or not this was the case among this study's respondents.

4.2.2.4 Respondents' occupational status

With these high levels of education which the women had attained, one would have expected them to be employed, as 58.7% ($f=88$) had attained at least secondary school education. However, jobs are extremely scarce in the Mutare District and table 4.3 indicates that only 19.3% ($f=29$) of the respondents were employed. As many as 60.0% ($f=90$) indicated that they

were unemployed. Those who were self-employed (10.7.0%; $f=16$), farm workers (4.0%; $f=6$) or peasant farmers (6.0%; $f=9$) also had extremely limited financial resources. This implies that 80.7% (121 out of 150) of the respondents might have encountered financial difficulties if they needed transport to a hospital or clinic. This possibility was supported by a study conducted in Kenya which reported: “Physical access to health facilities through distance and/or lack of transport, and economic considerations are important barriers for women to delivering in a health facility in Kenya” (Kitui et al 2013:1).

4.2.2.5 Parity of respondents

Table 4.4 shows that out of the 150 respondents, 30.7% ($f=46$) delivered their first babies, while 25.3% ($f=38$) delivered their second and 20.0% ($f=30$) delivered their third babies outside the health care facilities.

Table 4.4 Gravidity of respondents (N=150)

Gravida	Frequency	Percentage (%)
1	46	30.7
2	38	25.3
3	30	20.0
4	17	11.3
5	7	4.7
6	8	5.3
7	4	2.7
TOTAL	150	100.0

The practice of not delivering one’s first baby in clinics or hospitals is not recommended as the first babies should be borne with assistance as the woman’s capability to give birth has not yet been determined. Out of the 150 respondents who did not deliver their babies at health care institutions, 24.0% ($f=36$) were women who had been pregnant four or more times. As these women would be expected to have a higher incidence of obstetric complications, they should have delivered their babies in health care institutions where they could access emergency care.

Out of these 36 women, seven reported backache problems, nine had bleeding problems and five had headaches. All these complaints might have indicated potential obstetric problems and these women should definitely have delivered their babies at hospitals or clinics.

Table 4.5 Respondents' number of live children (n=142)

Number of live children	Frequency	Percentage
1	43	30.3
2	44	31.0
3	28	19.7
4	14	9.9
5	4	2.8
6	7	4.9
7	1	0.7
8*	1	0.7
Total	142	100.0

* Although table 4.4 indicates that no respondent had been pregnant for more than seven times, one woman reportedly had eight children because she had one pair of twins.

Comparing the figures from tables 4.4 and 4.5 indicates the following:

- 7 women had been pregnant 5 times, but only 4 women had five children
- 8 women had been pregnant 6 times, but only 7 women had six children
- 4 women had been pregnant 7 times, but only 1 women had seven children and 1 had 8 children (because of one set of twins).

These differences might indicate that some women had lost some children. However, this was not asked directly and this information could not be confirmed or denied retrospectively. However, table 4.6 indicates that 9.3% ($f=14$) of these women had lost children.

Table 4.6 Number of children who died (per respondent) (N=150)

Deaths	Frequency	Percentage
2	2	1.3
1	12	8.0
0	136	90.7
	150	100.0

Unfortunately it could not be ascertained whether or not these 14 children had died from obstetric-related causes. (The structured interviews were conducted completely anonymously by midwives making it impossible to link any specific woman with information on any completed interview schedule).

Thus the researcher could not identify which women had children who died, and could not determine the causes of these children's deaths by follow-up discussions with the women, nor by referring to their ANC obstetric records. These women did not have any obstetric records as they did not deliver their babies in health care institutions).

4.2.3 Women's perceptions/experiences of maternity services

Twelve items on the structured interview schedule requested respondents to share their experiences/perceptions concerning the ANC services provided in the Mutare District. Some questions in the structured interview schedule aimed to identify issues which could be addressed in ANC clinics to enhance the number of women who deliver their babies at health care institutions in future in the Mutare District of Zimbabwe.

Not all women were willing to respond to all items in this section and no one was coerced to reply to any specific question. As the number of responses differs per item, the number of non-responses per item is also indicated in table 4.7. The percentages for "extremely dissatisfied" and "dissatisfied" were combined to indicate the total number of respondents who were

dissatisfied with specific aspects of ANC services in the Mutare District of Zimbabwe. Likewise the percentages for responses indicating that the ANC services were “good” and “excellent” were combined to indicate the total percentage of satisfaction with any specific ANC aspect. By examining the percentages in these two columns (printed in bold in table 4.7), it becomes evident that the respondents were not satisfied with the services rendered at their ANC clinics. At least 50.0% of the respondents were dissatisfied with the nurses’/midwives’ actions of

- offering seats to the clients (50.0%’ $f=75$)
- listening to their patients/clients (50.7%; $f=76$)
- providing information about the danger signs of pregnancy (54.7%; $f=72$)
- sharing of general information (56.0%; $f=84$)
- being patient (57.3%; $f=86$)
- providing of pregnancy-related information (57.3%; $f=86$)

When the respondents’ evaluations of “good” and “excellent” were combined, no item scored more than 18.0% ($f=27$), indicating that few respondents regarded any aspects of the ANC services to be good.

Most aspects of ANC care were deemed to be “excellent” by only one, two or three respondents, except information on pregnancy-related danger signs which was reportedly experienced as being “excellent” by six (4.0%) respondents. However, 20 (13.3%) respondents were extremely dissatisfied and 52 (34.7%) were dissatisfied with this aspect. If women lack knowledge about the danger signs of pregnancy and childbirth, and if nurses/midwives fail to provide this information at ANC clinics, then the number of deliveries outside health care institutions might not decline in the Mutare District.

Women, who lack knowledge about the potential risks (and danger signs) of pregnancy and childbirth, cannot make informed decisions about their preferred places for delivering their babies. Only 17 (11.4%) women regarded the nurses'/midwives' history taking to be good or excellent, but 89.6% ($f=133$) history taking was reportedly not well managed. This implies that important aspects of these women's obstetrical and medical histories could be missing from their ANC records and that some pregnancy-related risks might be missed. This also implies that some women who should have delivered their babies at health care institutions for obstetric reasons, might not have been advised to do so. Mugweni et al (2008:8) reported similar levels of women's dissatisfaction with history taking at maternity services in the Marondera District of Zimbabwe.

4.2.4 Affordability of maternity services

Questions in this part of the structured interview schedule attempted to determine how much the women paid for transport and for ANC services. Tables 4.8, as well as, figures 4.4 and 4.5, portray these financial expenses, as reported by the respondents. As the majority of the participating women (80.7%; $f=121$) were unemployed or employed in the informal sector (see table 4.3), financial costs might impact negatively on their utilisation of health care services, preventing them from delivering of their babies at health care facilities and from using ANC services as often as recommended by Zimbabwe's focus-oriented ANC programme, namely a minimum of four times during each pregnancy (MOCHW 2008:27).

Table 4.8 Costs of transport and ANC services (N=150)

Service	No cost		Up to US\$49		US\$50-100		No reply	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
Transport	14	9.3	110	73.3	5	3.3	21	14.0
ANC services	5	3.3	123	82.0	7	4.7	15	10.0

The research results portrayed in table 4.8, indicate that 73.3% ($f=110$) of the respondents paid up to US\$49 for transport to get to a health facility, suggesting that they lived closer to health care facilities than those who paid US\$50-100 dollars. Even the transport cost of US\$50 is a lot of money for these women as most of them were unemployed or underemployed. Transport costs might prevent some women from delivering their babies at health care institutions. Thus health care facilities might be both inaccessible and unaffordable to some Zimbabwean women as a result of transport costs. Women living closer to health facilities pay less for transport costs and can more readily access delivery services at the health care centers than those women who live further away from such centers. The time required to reach such health care centers might also play an important role, as three women indicated that they delivered their babies on their way to the health care centers.

Although Zimbabwe's ANC and delivery services should be free of charge in public health care facilities (MOHCW 2008:27), this is not necessarily the case. The findings in table 4.8 indicated that 123 (82.0%) of the participating women paid up to US\$49 for ANC services and seven (4.7%) paid from US\$50 up to US\$100. It could not be ascertained from the available information precisely why these women had to pay for ANC services at public health care facilities.

4.2.5 Socio-cultural factors which could influence women's preferences for places to deliver their babies

This section consists of two items for eliciting information on socio-cultural practices that might influence respondents' choices for their preferred places to deliver their babies.

Table 4.9 Cultural practices (N=150)

Cultural Practice	Yes		No		No reply	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
*Masungiro	23	15.3	115	76.7	12	8.0
In-laws' demands (confirmation that the son is the family's)	9	6.0	128	85.3	13	8.7

*Masungiro" is a Shona term denoting the cultural practice that a woman should deliver her first born child at her parents' home so that the family can provide support during and after delivery and in caring for the new born baby (Mugweni et al 2008:12).

Table 4.9 indicates that only 15.3% ($f=23$) of the respondents were influenced by the socio-cultural expectation ("masungiro") of delivering their babies at home, while 76.7% ($f=115$) were reportedly not influenced by this consideration. As many as 85.3% ($f=128$) respondents were not influenced by the expectations of their parents-in-law not to deliver their babies in hospitals/clinics. Consequently, cultural practices seemed to play a minor role in determining women's preferences for places to deliver their babies in the Mutare District, contrary to the findings reported by Mugweni et al (2008:9) indicating that cultural aspects influenced the majority of women's decisions to opt for home deliveries in the Marondera District of Zimbabwe.

4.2.6. Knowledge about safe assisted deliveries

This part of the structured interview schedule addressed six aspects:

- The importance of specific aspects of a safe assisted delivery
- Occurrences which would prompt women in labour to seek medical assistance
- Information received from the ANC clinic about specific aspects pertaining to safe assisted deliveries
- Signs and symptoms which would make women suspect potential obstetric problems
- Whether the women had emergency delivery kits at home
- The contents of the home emergency delivery kits, if applicable

According to the 150 respondents, the following aspects were important to them about safe assisted deliveries:

- No interference during labour (96.7%; $f=145$)
- No interference during delivery of the baby and the placenta (98.0%; $f=147$)
- Clean cutting of the cord (98.0%; $f=147$)
- A clean surface on which to deliver the baby (98.0%; $f=147$)
- Clean hands and body (of assistant/s) (98.0%; $f=147$)
- Clean hands (97.3%; $f=146$)
- A clean environment (97.3%; $f=146$)

Aspects which were regarded as being important during delivery included clean surfaces, the attendant's clean hands and cutting the umbilical cord in a clean manner. Although these aspects might not have been there during their births at home or at the TBAs' places, these women still opted to deliver in these environments. However, whether or not some or all of these requirements had been met at the women's places of delivery could not be ascertained from the information provided during the structured interviews. It could also not be ascertained whether all these expectations would be met during institutional deliveries, although these would constitute minimum expectations of institutional deliveries.

4.2.6.1 Danger signs for which women in labour would seek medical care

Table 4.10 indicates for which danger signs the women would seek medical care (the “yes” responses). All 150 respondents replied to all these yes/no items. The conditions for which at least 90% of the respondents would seek medical interventions were excessive bleeding (96.0%; $f=144$), ruptured membranes (95.3%; $f=143$), fever after delivery with vaginal discharge (95.3%; $f=143$), convulsions (95.3%; $f=143$), fever without vaginal discharge (90.0%; $f=135$), dizziness/blurred vision (90.7%; $f=136$). Although it is commendable that at least 90.0% of the respondents would seek medical help for these conditions, ideally 100.0% of pregnant women should seek medical help for all conditions listed in table 4.10.

Table 4.10 Potential danger signs for which respondents would seek medical care during and after labour (N=150)

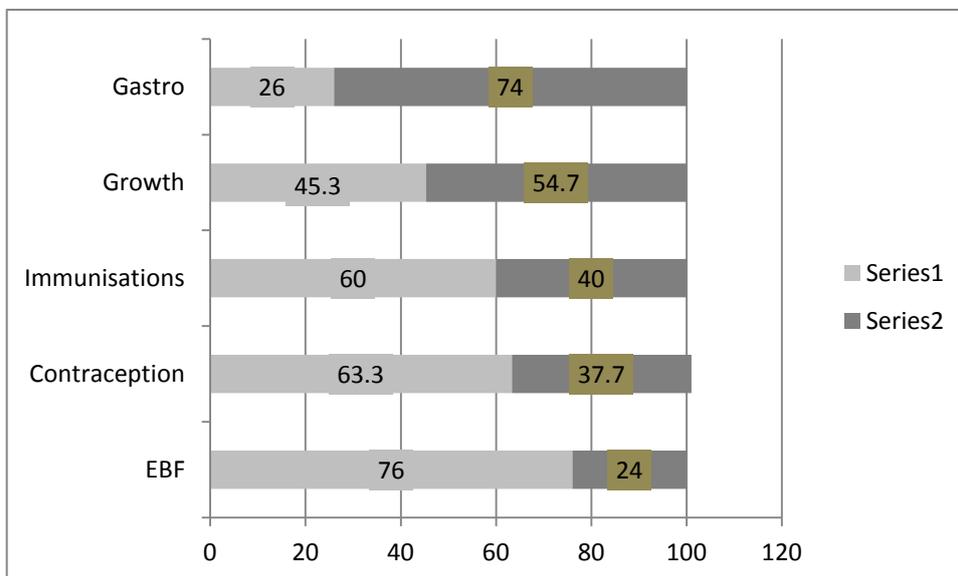
Condition	Yes		No	
	<i>f</i>	%	<i>f</i>	%
Excessive bleeding	144	96.0	6	4.0
Ruptured membranes	143	95.3	7	4.7
Fever after delivery with vaginal discharge	143	95.3	7	4.7
Convulsions	143	95.3	7	4.7
Fever without vaginal discharge	142	94.7	8	5.3
Dizziness/blurred vision	136	90.7	14	9.3
Labour pains lasting more than 12 hours	134	89.3	16	10.7
Generalised oedema	124	84.7	26	15.3
Breathlessness and tiredness	120	80.0	30	20.0
Severe headaches	88	58.7	62	14.3

Fewer than 90.0% of these 150 women would seek medical attention for labour pains lasting more than 12 hours (89.3%; $f=134$), generalised oedema (84.7%; $f=124$), breathlessness and tiredness (80.0%; $f=120$) and severe headaches (58.7%; $f=88$). Labour pains lasting more than 12 hours could be due to obstructed labour and should preferably be managed by trained midwives who can refer such women to higher level health care institutions where medical procedures could save the mother’s and the baby’s lives. Women suffering from generalised oedema, breathlessness and tiredness and/or severe headaches, might be suffering from pregnancy induced hypertension and could end up with eclampsia/pre-eclampsia,

potentially life-threatening situations, endangering their own and their unborn/newborn babies' lives. It is up to the nurses and midwives at the ANC clinics to teach pregnant women at what stages to seek medical help for which signs and symptoms. Reportedly the majority of obstetric deaths in Zimbabwe, other than those attributable to postpartum haemorrhage, are due to complications arising from abortions and from severe pre-eclampsia/eclampsia (MOHCW 2009:8), and all pregnant women should seek medical help for these conditions.

4.2.6.2 Information received from ANC clinics about caring for the newborn baby and about contraception

Figure 4.3 indicates that health education was received by at least 60.0% of the respondents from the ANC clinics about early and exclusive breastfeeding (76.0%; $f=114$), contraception (63.3%; $f=95$) and immunisations (60.0%; $f=90$). However, apparently fewer than 60.0% of the women received information about the signs, symptoms and treatment of gastro-enteritis (26.0%; $f=39$) and about normal growth and development of the baby (54.7%; $f=82$).



Series 1= yes: information received; series 2 = no: information not received

Figure 4.3 Information respondents received from the ANC clinic (reflected in percentages) (N=150)

4.2.6.3 Emergency delivery kits

As many as 62.0% ($f=93$) of the women reportedly possessed emergency delivery kits, as shown in figure 4.4 while 38.0% ($f=57$) did not have such delivery kits at their homes.

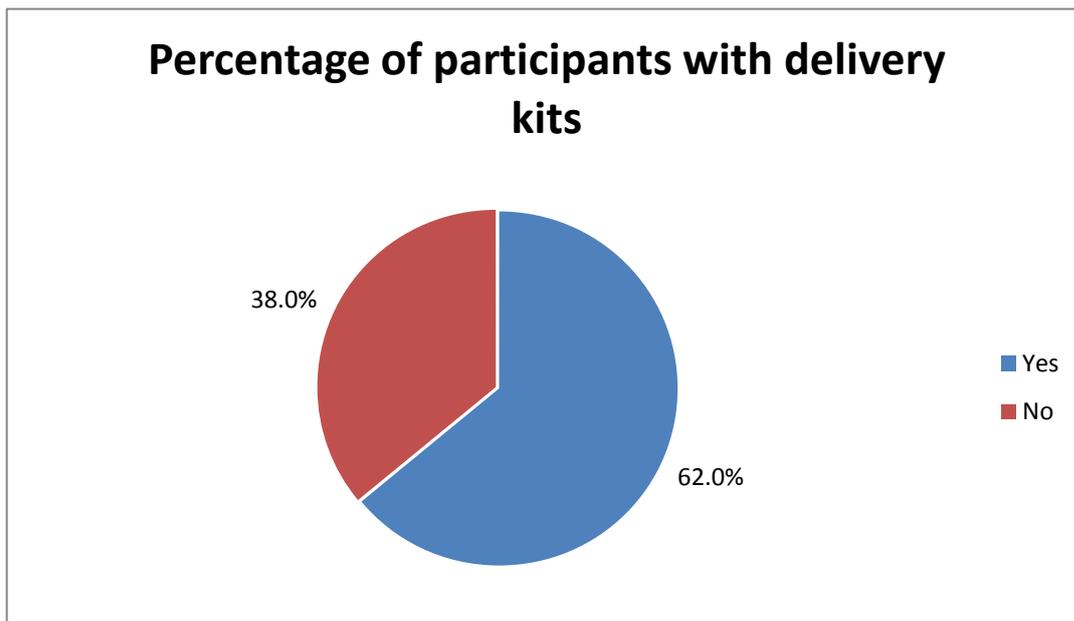


Figure 4.4 Respondents who had emergency delivery kits (N=150)

Figure 4.5 shows the contents of these emergency delivery kits. Although 64.5% ($f=60$) of the 93 respondents with emergency home delivery kits, had fairly well equipped kits, figure 4.5 shows that most women did not have three cord ties in their kits. Only 12.9% ($f=12$) out of these 93 women had three cord ties. Most women included the other contents required of such an emergency home delivery kit:

- a new razor blade (97.8%; $f=91$)
- gauze and cotton swabs (89.2%; $f=83$)
- methylated spirits (97.8%; $f=91$)
- soap (97.8%; $f=91$)

Although it is commendable that the majority of these 93 women's

emergency home delivery kits contained almost everything required in such a kit, all 150 women should have possessed such kits with everything in all these kits. Nurses/midwives at ANC clinics should stress the importance to every pregnant woman of having such a home emergency delivery kit available in case it might be required.

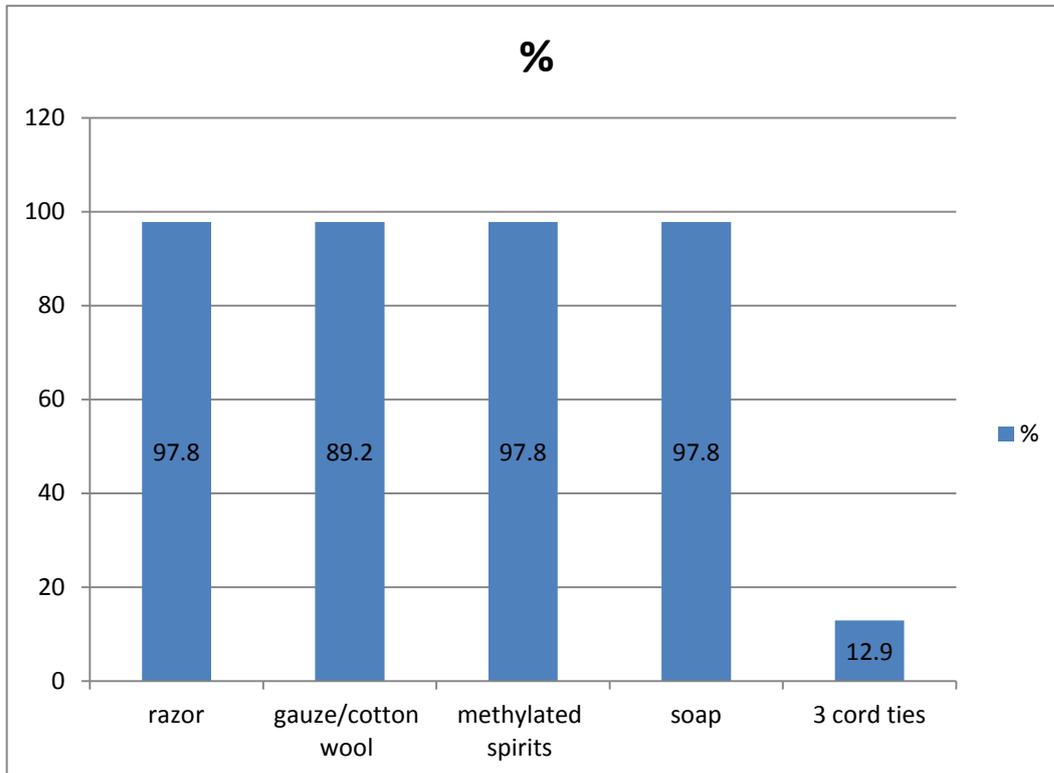


Figure 4.5 Contents of emergency home delivery kits (n=93)

4.2.7 Procedures followed when labour commenced

This section of the structured interview schedule attempted to determine what procedures women followed when the labour process started and to identify whether any factors could have influenced them to deliver their babies at home rather than at health care institutions at this late stage of their pregnancies.

4.2.7.1 Actions taken when labour started

The actions taken by women when they realised that the labour process had

started are reflected in table 4.11. These totals add up to 208, not to 150, as respondents could have supplied more than one answer to specific questions in this section.

Table 4.11 Actions taken when labour started (n=208)

Action taken	<i>f</i>	%
Decided not to go the hospital	73	35.1
Consulted TBA	30	14.4
Asked for help from a friend or relative	98	47.1
Consulted other people	7	3.4
Total	208	100.0

Table 4.11 shows that 35.1% ($f=73$) of the respondents decided not to go to the clinic/hospital at the initiation of labour, 14.4% ($f=30$) consulted a traditional midwife and 47.1% ($f=98$) asked for help from a relative or friend.

4.2.7.2 Reasons for home deliveries

The respondents indicated that their major health-related reasons for home deliveries were that:

- the hospital/clinic was too expensive (42.7%; $f=64$)
- the hospital or clinic was too far from home (40.0%; $f=60$)
- had bad experience during ANC or with previous deliveries (36.7%; $f=55$)
- nurses were rude at the ANC clinics (30.2%; $f=45$)
- labour commenced during the night (24.7%; $f=37$)

At least 40.0% ($f=64$) of the respondents preferred home deliveries because the hospital/clinic was too expensive and because the hospital/clinic was too far from home. As indicated in section 4.2.2.4 of this dissertation 80.7% ($f=121$) of these women were unemployed, or employed in the informal sector, and had meager monthly incomes. Thus these women might not have had the financial resources to pay the hospital/clinic fees nor to travel to a hospital or clinic. Improving the affordability and accessibility of

maternity services by abandoning fees for the pregnant women in the Mutare District would seem to be essential to enable more women to deliver their babies at health care facilities rather than at home. The midwives' and nurses' attitudes might have influenced some women's decisions to opt for home deliveries. This is the case because 36.7% ($f=55$) of the women reportedly had unpleasant or "bad" previous delivery experiences and 30.2% ($f=45$) considered the nurses to be rude at the ANC clinics. Thus the attitudes of nurses and midwives towards patients during their ANC visits might influence women's preferences for home deliveries.

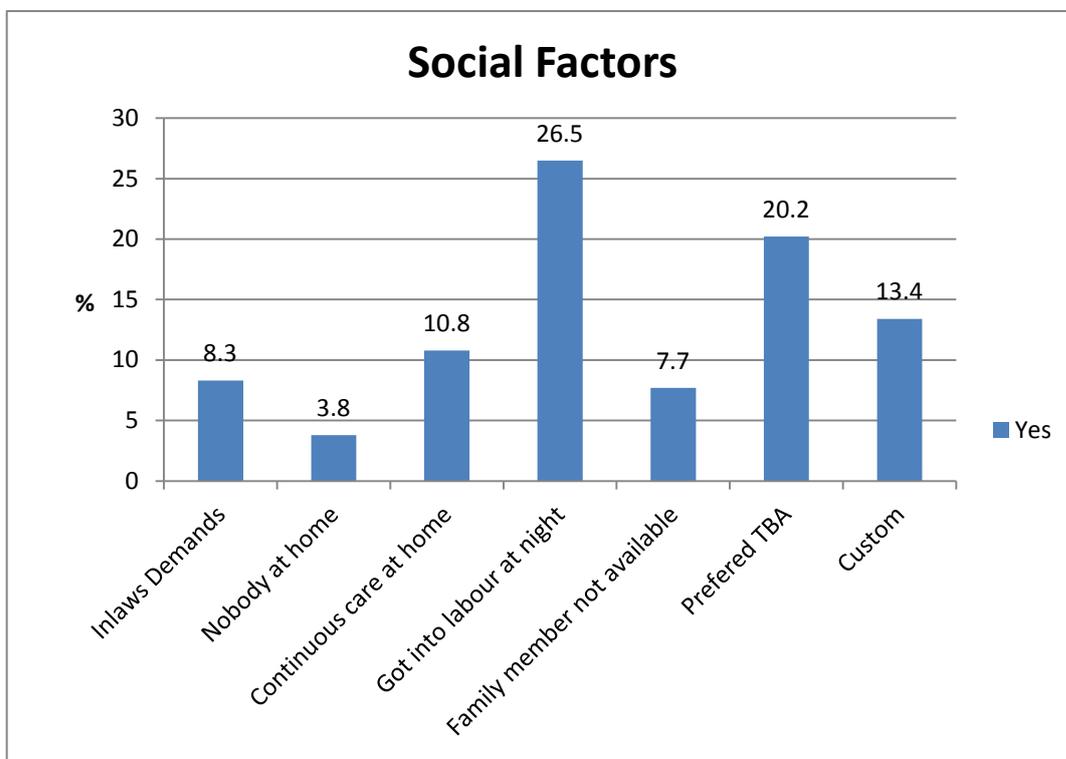


Figure 4.6 Social factors influencing women's preferences for home deliveries (N=150)

At least 24.7% ($f=37$) of the 150 respondents, might have considered delivering their babies at a health care facility, but they could not access such facilities when their labour commenced during the night. They did not supply specific reasons, but women might have been unable to obtain and/or afford transport to such facilities during the night. Public (bus) transport is unavailable during the night and private transport (such as taxis) are much more expensive during the night and more problematic to access

than during the day. Figure 4.6 indicates that no social factor had any major impact on women's decisions not to deliver their babies at health care facilities.

4.2.7.3 Problems experienced during and after delivery

Reportedly 64.7% ($f=97$) of the women experienced no problems during or after delivery. However, 22.7% ($f=34$) did experience some problems. In response to an open-ended question, these women identified the following problems:

- continuous vaginal bleeding (44.1%; $f=15$)
- headaches (17.6%; $f=6$)
- breathing problems (2.9%, $f=1$)
- labour pains lasting many hours (2.9%, $f=1$) (number of hours not indicated)
- abdominal pains (2.9%; $f=1$)
- backache (29%; $f=10$)

Each of these problems could have serious implications, and could even be life threatening for the woman and/or baby. Severe backache is a debilitating condition for women in the Mutare District who have to carry firewood, water and almost every possible requirement for their families on their heads. Women work in their homes, till their lands and accomplish all their daily tasks with their babies strapped on their backs. A woman experiencing backache might be unable to carry the baby on her back for approximately twelve hours per day, and might be unable to supply her family with firewood, water and food because she might be unable to carry these loads on her head, probably while carrying a baby on her back.

Continuous vaginal bleeding after the delivery of a baby could result from a retained placenta, a deep tear in the perineum, or injury to the uterus and could be indicative of obstetric emergencies. These women should be referred to specialised health care facilities without delays to prevent maternal mortality and morbidity.

4.2.7.4 Persons consulted about problems experienced after delivery

Out of the 34 respondents, who encountered obstetric problems after birth, 52.9% ($f=18$) consulted no one about their problems. This could indicate a serious need for ANC health education to inform women about the dire need to get specialised medical help to treat complications which could be life threatening to mothers and/or babies, or which could impose lifelong morbidity on the women and/or their newborn babies. Only 47.1% ($f=16$) of these women consulted nurses about their post natal problems. These complications were treated by:

- African herbs
- medicines given to the baby
- re-suturing of the perineal wound (which failed to heal after the initial suturing after the delivery of the baby)
- removal of the placenta by the doctor
- pills
- intravenous fluids

Some women apparently received appropriate treatment for their post-partum complications – some of which might have been prevented if the women had delivered their babies at health care institutions and had been referred to higher levels of health care institutions for timely treatment.

4.2.7.5 Women's suggestions for improving maternity services

In response to an open-ended question, 62.7% ($f=94$) of the respondents indicated that maternity services in the Mutare District could be improved by:

- building shelters at all clinics for pregnant women who live far away from clinics and who want to deliver their babies at health care institutions
- ensuring that more efficient and more affordable transport systems

- are accessible to pregnant women
- reducing or removing delivery fees

A number of respondents emphasised that nurses could take the following steps to improve the ANC services which might motivate more women to deliver their babies at health care institutions in the Mutare district:

- nurses should be friendlier and have a more welcoming attitude to all patients
- nurses should maintain good interpersonal relationships with their patients
- nurses should schedule regular meetings with the community to identify and address shortcomings and to provide relevant information to the community members
- ANC nurses should not be “rough” and should never scold patients
- nurses should always remain humble and treat patients as unique persons
- nurses should not refer patients to other health care institutions/professionals unnecessarily

According to the respondents, the health care system could implement the following improvements and/or address the following shortcomings:

- delivery costs must be reduced or removed
- drugs should always be available at every clinic
- clinics should not run out of water
- cotton wool and gloves must be supplied by the clinic (and pregnant women should not be expected to supply these items)
- increase the number of nurses working at rural health centers
- transport must be available for urgent referrals from clinics to hospitals

The following direct quotations from two participants might portray the reality of the shortcomings of the current health care facilities in the Mutare District

and indicate the dire need for enhancing these facilities to enable more women to deliver their babies at these facilities:

“Mutare Hospital’s fees are too high that patients are dying at home”.

“I was shouted at by a nurse because I had fallen pregnant too soon after my husband’s death according to the nurse. She spoke at the top of her voice and made sure everyone would hear her and see that she was referring to me. I vowed I would never go back to that institution for delivery or even post-delivery”

4.3 SUMMARY

The research results obtained from the analysis of the information from 150 completed structured interviews were presented and discussed according to the sections of the interview schedule. The conclusions based on these results will be presented in the next chapter of this dissertation. Initially the conclusions will be presented according to the objectives set for this research and thereafter these will be contextualised within the major components of the HBM. The implications/recommendations arising from the conclusions will also be provided in chapter 5 as well as the limitations which might restrict the generalisability of these research results

CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this study was to identify reasons why women preferred home deliveries in the Mutare district of Zimbabwe. It was hoped that this knowledge could help to increase the number of deliveries in the health care institutions and decrease the number of home deliveries in order to reduce morbidities and mortalities among mothers and newborn babies. There was a need to generate information which could be used by nurses, midwives and health care planners to implement interventions directed at reducing home deliveries and increasing institutional deliveries.

In this chapter the objectives of the study were evaluated to determine whether they had been attained. The HBM underpinned the conclusions of the study as discussed in Chapter 1 of this dissertation. Women's health seeking behaviors, during pregnancy and delivery, are based on perceived risks, perceived severity, perceived benefits and costs, motivation and enabling as well as modifying factors influencing the women's access or non-access to and non-utilisation of health care services. The conclusions are based on the results pertaining to the respondents' socio-demographic factors, perceptions/experiences about ANC services, affordability/accessibility, socio-cultural factors, knowledge about safe assisted deliveries. Also presented in this chapter are the limitations impacting on the generalisability of the findings, and recommendations for clinical practice and for future research.

5.2 CONCLUSIONS

The specific objectives of this study were to:

- identify reasons why pregnant women, who utilised ANC services in Mutare District, did not deliver their babies at health care institutions
- identify what problems women encountered during home deliveries
- make recommendations to the health care authorities of Mutare District to enable more women to deliver their babies at health care institutions

The conclusions will be presented in relation to the first two objectives. The third objective will be addressed in section 5.4 (recommendations).

5.2.1 Reasons why women, who used ANC services, did not deliver their babies at health care institutions in the Mutare District

These reasons might have been attributable to factors related to the women's ANC and/or delivery experiences or anticipations.

5.2.1.1 ANC-related aspects' potential impact on women's preferences not to deliver their babies at health care institutions

Although these 150 interviewed women used ANC services, they did not do so optimally because they started their ANC visits too late during the pregnancies and/or paid too few ANC clinic visits. Some respondents (25.3%; $f=38$) reportedly only had one ANC visit, and 73.3% ($f=110$) had three or fewer ANC visits, instead of the four visits recommended by the MOHCW. Only 26.7% ($f=40$) of the respondents complied with the recommended minimum number of four ANC visits.

As many as, 68.7% ($f=103$) of the respondents had their initial ANC visit during the second trimester, 19.3% ($f=29$), in the third trimester and only the 4.7% ($f=7$) in the first trimester, as recommended by the MOHCW. Women should begin ANC care early

during their pregnancies (ZDHS 2010/11:109). The recommended period is during the first trimester between 12 and 16 weeks' gestation. Services could have a greater impact on the wellbeing of both baby and the mother when ANC commences during the early weeks of pregnancy. Possible interventions during the ANC period include the diagnosis and treatment of anaemia, providing malaria prophylaxis, providing PMTCT services and treating of infections like syphilis.

Women were dissatisfied with ANC services offered in the Mutare District, but especially with the nurses' attitudes during ANC visits, as only 8.7% ($f=13$) of the respondents were satisfied with the nurses' attitudes (see table 4.7). Transport costs (86.7%; $f=130$) and delivery costs (76.6%; $f=115$) affected the women's preferences for home deliveries, as shown in table 4.8. However, cultural factors pertaining to the women's own parents (15.3%; $f=23$) and to those of the families-in-law (6.0%; $f=9$) only influenced a few women's preferences for not delivering their babies at health care institutions. The respondents had limited knowledge about potential danger signs of pregnancy and labour as only 58.7% ($f=88$) of the women would seek medical care for severe headaches (see table 4.10).

5.2.1.2 Socio-demographic aspects' potential impact on women's preferences not to deliver their babies at health care institutions

- Age

The youngest respondent was 18 and the oldest one was 45 years old and the modal age was 28. Out of the 150 respondents, 31.4% ($f=47$) fell within high risk age groups as 10.7% ($f=16$) were adolescents (aged 14-19) and 20.7% ($f=31$) were 35 or older (see table 4.2). Based on their ages, these 47 women should have delivered their babies at health care institutions as they could be regarded as high risk obstetric patients, incurring potential maternal and/or newborn mortality and/or morbidity during home

deliveries. During ANC visits these potential risks should be emphasised as well the need for hospital/clinic deliveries

- *Parity*

As many as 30.7% ($f=46$) of the respondents delivered their first babies at home. It is advisable that any woman should deliver her first baby at a health care institution as her ability to give birth normally is unknown with her first baby's delivery. It is advisable to have skilled birth attendants during any woman's delivery of her first baby, but especially if the pregnant woman is an adolescent (aged up to 19) or an elderly woman (aged 35 or older).

- *Employment*

Many respondents (80.6%; $f=121$) were under- or unemployed and thus probably fell within the lower income groups (see table 4.3). The WHO (2007:6) maintains that low income status limits women's access to and utilisation of maternity services in terms of non-affordability of transport costs, payment for maternity and other health care services. Although 58.7% ($f=88$) of the respondents had completed their secondary school, high school or tertiary education, this had apparently no influence on their decisions to deliver their babies outside hospitals or clinics. However the midwives in Mutare District should utilise these women's high literacy rates to provide more effective health education about pregnancy and childbirth-related issues and risks.

- *Women's perceptions of the ANC services*

Some women were dissatisfied with the ANC services rendered in the Mutare district. Most of respondents were dissatisfied with the lack of a welcoming attitude on the part of the nurses 34.6% ($f=45$); lack of friendliness of the nurses 34% ($f=42$); failure to offer a seat to patients 42% ($f=50$); the way in which nurses talked to the patients 25% ($f=30$);

nurses' failure to listen while patients talked 52% ($f=64$); lack of patience on the part of the nurses 47% ($f=56$).

- *Financial costs*

The cost of maternity services affects women's choice of place of delivery. Transport costs to the health care institution probably affected the women's choice of place to deliver their babies. Table 4.8 indicates that 77.3% ($f =116$) incurred transport costs 86.7% ($f =130$) paid fees to the hospital or clinic, although these services were supposed to be rendered free of charge.

Cultural practices influenced some of the women's choice of place of delivery. The study revealed that only a minority of women who delivered their babies at home were influenced by the following cultural practices as reflected in table 4.9: Masungiro (cultural expectation to deliver at the woman's mothers house) (16%; $f= 23$) and demands from the women's families-in-law (6.0%; $f=9$)

- *Knowledge about danger signs of pregnancy and during labour*

All respondents lacked knowledge about danger signs that could occur during pregnancy and labour, and about the risks of delivering at home. Recognising potential danger signs and seeking medical help timeously could help to reduce the maternal and/or infant and/or mortality rates in the Mutare District. The WHO (2009:6) points out that for women to make informed decisions on the choice of place of delivery they should be well informed about danger signs that could occur during pregnancy and labour.

5.2.2 Problems women encountered during and after home deliveries of babies

Only 34 out of the 150 interviewed women encountered problems during and after home deliveries, including continuous vaginal bleeding (44.1%; $f=15$), backache (29.0%;

$f=10$), headaches (17.6%; $f=6$), labour pains lasting many hours (2.9%; $f=1$), abdominal pain (2.9%; $f=1$) and one baby (2.9%; $f=1$) encountered breathing problems. These obstetric complications were treated with African herbs, medicines given to the baby, re-suturing of the perineal wound, removal of the placenta by a doctor, pills and intravenous fluids. No one appeared to have sustained problems. However, some of these problems could have been prevented during institutional deliveries.

5.3 LIMITATIONS OF THE STUDY

Limitations of this study that could impact on the generalisability of the findings include:

- The inability to include all health care centers in the Mutare district in this survey largely due to limited resources, particularly time and finances limited the accessibility of some centers because transport and fuel were scarce in Zimbabwe and the roads were very bad in some places.
- The study was limited to women attending health care centers when the researchers were at specific centers to conduct interviews. Consequently the results cannot be generalised to women who did not use clinic services for themselves and/or for their babies.
- Only women who had utilised ANC services and delivered at home were included in the study. The rationale for this decision was to identify reasons why women who used ANC services, failed to deliver their babies at health care institutions. However, women who did not attend ANC clinics and who delivered their babies at home, as well as those who delivered at health care centers, might have had different reasons for their preferences. Consequently the results of this survey might only be applicable to women who utilised ANC services, but who did not deliver their babies at health care facilities, in the Mutare District of Zimbabwe.

5.4 RECOMMENDATIONS

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

Institutional deliveries in the Mutare District based on the research results, might be enhanced if the following recommendations could be implemented:

- train and strengthen nurses' and midwives' knowledge, skills and implementation of the goal oriented or focused ANC policy of the MOHCW of Zimbabwe
- midwives and nurses should educate pregnant women about the importance of safe assisted deliveries and about danger signs during pregnancy and labour when medical aid should be obtained
- sufficient numbers of midwives and nurses should be available at the health care centers
- in-service training programmes should address nurses'/midwives' attitudes to pregnant women and to women during labour
- women should evaluate the quality of care provided at ANC clinics and at midwifery units and these reports should be analysed and discussed with the health care authorities and with the community members
- these evaluations could be used to assist health care planners to enhance the quality of ANC and midwifery services in the Mutare district and thereby to increase the proportion of institutional deliveries
- a shelter for pregnant women should be built at rural health centers where women could spend the last week of their pregnancies within easy reach of the center
- the community should be involved to develop plans for dealing with emergencies, such as the transportation of women in labour
- health education efforts to increase the number of institutional deliveries (to reduce maternal/infant mortality/morbidity risks in Zimbabwe) should have a

greater impact as many women acquired secondary or higher levels of education and should be able to benefit from effective health education

Future studies should investigate:

- the utilisation of ANC services at all health care institutions in the Mutare district
- the quality of ANC services
- the effect of ANC attendance on pregnancy outcomes should be compared between women who utilised ANC services and those who did not do so
- communication effectiveness between midwives/nurses and clients
- the lived experiences of women who delivered their babies at home and compare these with the lived experiences of women who delivered their babies at health care institutions
- the priorities of the Mutare District's health care objectives, "... combining both normative and empirical methods to further analyze and correct past problems at [while] the same time use the good practices to improve the current pirotity setting process" (Chitama, Baltussen, Ketting, Kamazima, Nswills & Mujinja 2011).

5.5 CONTEXTUALISING THE RESEARCH RESULTS, CONCLUSIONS AND RECOMMENDATIONS WITHIN THE MAJOR COMPONENTS OF THE HEALTH BELIEF MODEL

In this study the reasons were investigated why women, who utilised ANC services, did not deliver their babies at health care institutions, and these could be contextualised within the HBM's major principles:

- individual perceptions
- modifying factors
- variables affecting the likelihood of initiating actions (Onega 2000:271)

5.5.1 Individual perceptions

Onega (2000:271) defines individual perceptions as a person's beliefs about his/her own susceptibility to a disease or condition plus the seriousness with which he/she views the perceived threat thereof. Many women did not perceive the delivery process to be one warranting the interventions of midwives. Individual perceptions can change with increased knowledge. The nurses working at the health institutions in the Mutare District should be able to capitalise on the good education standards attained by these women and the fact that they actually come for ANC services to teach the women about the danger signs of pregnancy and labour and about the importance of institutional deliveries.

5.5.2 Modifying factors

Modifying factors according to Onega (2000:271) include demographic, socio-psychological and structural variables affecting health-related behaviors. In this study demographic factors which might have modified women's decision to deliver their babies at home related to the distance the women had to travel to the nearest clinic. Building shelters for pregnant women at the clinics, as recommended by a number of women in response to an open-ended question, could address this challenge to enhance the number of institutional deliveries.

Age-related factors which need to be addressed by enhanced health education drives should indicate that teenagers, prima gravidas and multi gravidas as well as grand multi gravidas should deliver their babies at health care institutions because of their increased obstetric risks. Although most women were married, family-related expectations had almost no impact on their preferences for places to deliver their babies.

The majority of women were dissatisfied with the ANC services offered in the Mutare District. Women incurred transport and delivery costs and most women were under or unemployed and could not afford these expenses. At least some women regarded the costs and inconvenience (including the nurses' reported impoliteness) of delivering their babies in health care institutions to outweigh the perceived benefits of home deliveries. This could be the case because most women lacked knowledge about the risks of home deliveries.

5.5.3 Variables affecting the likelihood of initialising actions

The perceived benefits of institutional deliveries would be the expected support from the midwives and the regular monitoring of the progress of the labour process as well as monitoring the babies' conditions during and after delivery. However, if the midwives might not meet these expectations, based on the women's' negative evaluations of their ANC, then the advantages of institutional deliveries would be almost non-existing, exerting almost no influence on women's decisions to deliver their babies in institutions rather than at home.

The minimal benefits expected from institutional deliveries might not have offset the perceived costs to the women to access institutional deliveries. Access problems included the cost of transport and the need to get someone else to tend to the other children left at home while the mother and the newborn baby might be at the health institution. The perceived negative non-caring attitudes of the midwives at ANC clinics also posed a barrier to accessing institutional delivery services.

Thus in terms of the HBM, minimal benefits were expected from institutional deliveries MINUS expected costs EQUALS the likelihood that home deliveries will continue to be favored.

5.6 SUMMARY

Chapter 5 presented the conclusions, the limitations, and recommendations of the study. The chapter further presented the assumptions and the findings relevant to these findings, contextualized within the HBM. This survey attempted to identify reasons for discrepancies between the high ANC bookings and home deliveries, in an attempt to reduce the number of home deliveries. The research results indicated that the major factors preventing women from delivering their babies in institutions are related to midwives' attitudes and lack of care, transport costs, payment for expensive delivery services, patients who went into labour during the night (when transport was inaccessible) and nurses' reported impoliteness during the respondents' ANC visits.

“Some women do not perceive a need to deliver in a health facility and may value health facility delivery less with subsequent deliveries. Access to appropriate transport for mothers in labour and improving the experiences for mothers using health facilities at childbirth augmented by health education may increase uptake of health facility delivery in Kenya” (Kitui et al 2013). Similar situations would probably prevail in other SSA countries, including Zimbabwe. However, maternal/neonatal mortality/morbidity rates could possibly also be reduced by providing training and supervision to traditional and other unskilled birth attendants. “Over the next five years, many millions of women within South Asia and sub-Saharan Africa will give birth without an SBA [skilled birth attendant]. Efforts to improve access to skilled attendance should be accompanied by interventions to improve the safety of non-attended deliveries” (Crow et al 2012).

LIST OF REFERENCES

AbouZahr, C & Wardlaw, T. 2001. *Maternal mortality at the end of a decade: signs of progress*. Geneva: WHO.

Adam, F. 2003. Glossary of epidemiology terms. *The Internet Journal of Paediatrics and Neonatology* 3(1):2-5.

Adapted from United Nations Children's Fund, *The State of the World's Children 2009: Maternal and new born health*. New York: UNICEF.

Angus, Y & Horiuchi, S. 2012. Factors influencing the use of antenatal care in rural West Sumatra, Indonesia. *Bio Med Central Pregnancy & Childbirth*, 12(9). Doi: 10.1186/1471-2392-12-9

Babbie, ER & Mouton, J. 2007. *The practice of social research*. 11th edition. Cape Town: Oxford University Press.

Bennett, RV & Brown, LK. 2001. *Myles' textbook for midwives*. 14th edition. London: Churchill Livingstone.

Borak, S & Stein, B. 1993: *East-West mortality and its potential explanations: proposed research agenda*. *Lancet* 342:1142-1145.

Brink, PJ & Wood, MJ. 1998. *Advances in nursing research*. 2nd edition. London. Sage.
Bryman, A. 2001. *Social research methods*. New York: Oxford University Press.

Burns, N & Grove, SK. 2001. *The practice of nursing research: conduct, critique and utilization*. 4th edition. St Louis: Elsevier/Saunders.

Burns, N & Grove, SK. 2005. *The practice of nursing research: conduct, critique and utilization*. 5th edition. St Louis: Elsevier/Saunders.

Campbell, O. Gipson, R. Isaa, AH. Matta, N. Deeb, B, El. Mohandes, A. Alwen, A & Mansour, E. 2005. National maternal mortality ratio in Egypt halved between 1992-1993 and 2000. *Bulletin of the World Health Organization* 83(6):462-71.

Carlson, M. 2011. Who attends antenatal care and expanded programme on immunization services in Chad, Mali and Niger? The implications for insecticide-treated net delivery. *Malaria Journal*, 10:341. Doi: 10.1186/1475-2875-10-341

Central Statistical Office. 2002. *Zimbabwe demographic and health survey 2000-1*. Calverton, Maryland: CSO and Macro International incorporated.

Central Statistical Office (Zimbabwe). 2007. *Zimbabwe demographic and health survey 2005-6*. Calverton, Maryland: CSO and Macro International incorporated.

CSO – see Central Statistical Office (Zimbabwe)

Chaibva, CN, Ehlers, VJ & Roos, JH. 2009. Adolescent mothers' non-utilisation of antenatal care services in Bulawayo, Zimbabwe. *Curationis* 33(3):10-17.

Chang, J. Elam-Evans, LD. Berg, CJ. Herdon, J. Flowers, L. Seed, KA & Syverson, CJ. 2003. *Pregnancy-related mortality surveillance-United States*. New York: Oxford University Press.

Chitama, D, Baltussen, R, Ketting, E, Kamazima, S, Nswilla, A & Mujinja, PGM. 2011. From papers to practices: district level priority setting processes and criteria for family planning, maternal, newborn and child health interventions in Tanzania. *Bio Med Central Women's Health* 11(46). doi:10.1186/1472-6874-11-46

Chitambo, BR. Smith, JE & Ehlers, VJ. 2003. Community participation in providing antenatal services in Zimbabwe. *Africa journal of Nursing and Midwifery*, 5 (1): 56-64.

Crowe, S, Utley, M, Costello, A & Pagel, C. 2012. How many births in sub-Saharan Africa and in South Asia will not be attended by a skilled birth attendant between 2011 and 2015? *Bio Med Central Pregnancy & Childbirth*, 12(4). doi:10.1186/1471-2329-12-4

Crowther, CA. 1996. Maternal deaths at Harare Maternity Hospital during 1983. *South African Medical Journal* 69(3) 180-182

Darmstadt, GL. Bhutta, ZA. Cousens, S. Adams, T. Walker, N & De Bernis, L. 2005. Evidence Based Cost-Effective Interventions: How Many Newborns Can We Save? *Lancet* 365:977-88.

Darmstadt GL, Lee ACC, Cousens S, Sibley L, Bhutta ZA & Donnay F. 2009 . 60 million on-facility births: Who can deliver in community settings to reduce intrapartum-related deaths? *International Journal of Gynaecology& Obstetrics* S89-S112.

Department of Health (of South Africa). 2001. Saving mothers: report on inquiries into maternal deaths in South Africa, 1998. *Nursing Update* 25(1): 16-18

De Vos, AS, Strydom, H, Fouché, CB & Delpont, CSL. (ed) 2002. *Research at grass roots level for the social science and human service professions*. 2nd edition. Pretoria: Van Schaik.

De Vos, AS (ed). 2005. *Research at grass roots for the social sciences and human professions*. 3rd edition. Pretoria: Van Schaik.

DOH – see department of Health

Ehlers VJ, Maja T, Sellers E & Gololo M, 2000. Adolescent mothers' utilisation of reproductive health services in the Gauteng Province of the Republic of South Africa. *Curationis* 24(3):43-51.

Ehlers VJ & E Mugweni, 2008. Factors contributing to the disparity between antenatal bookings and Institutional deliveries in Marondera District. *Curationis* 31(2):5-13.

Fawcus, SR. Van Coeverden de Groot, HA. & Isaacs, S. 2005. A 50-year audit of maternal mortality in the peninsula: maternal and neonatal service, Cape Town (1953-2002). *British Journal of Obstetrics and Gynaecology* 112(9):1257-63.

Fonn, S, Xaba, M, Tint, K, Conco, D & Varkey, S. 1998. Maternal health services in South Africa. Paper presented during the 10th Anniversary of WHO 'Safe Motherhood' initiative. *South African Medical Journal* 6:697-701

Fraser, DM & Cooper, MA. 2003. Myles textbook for midwives. 14th edition. Edinburgh: Churchill Livingstone.

Gabrysch, S & Campbell, OMR. 2009. Still too far to walk: Literature review of the determinants of delivery service use. *BioMed Central Pregnancy and Child Birth*, 23:93.

Glanz, K. Rimer, BK & Lewis FM. 2005. *Health behaviour and health education: theory, research and practice*. 3rd edition. New Jersey: HB printing.

Gulmezoglu AM. Say, L. Betran, AP. Villar, J & Piaggio, and G. 2005. *WHO Systematic review of maternal mortality and morbidity: methodological issues and challenges*. Geneva: WHO. [Online] Available from: <http://www.un.org/millenniumgoals/bkgd.shtml> [Accessed on 3 April 2009].

Horon, IL. 2005. Underreporting of maternal deaths on death certificates and the magnitude of the problem of maternal mortality. *American Journal of Public Health* 95(3):478-482. [Online] Available from: <http://www.comminit.com> [accessed 4 April 2009].

Idris, SH, Gwarzo, MD & Shehu A.U. 2006. Determinants of delivery place among women in semi-urban settlement in Zaria, Northern Nigeria. *Annals of African Medicine* 5(2):68-72.

Kambarami, RA, Chirenje, MZ & Rusakaniko, N, 1997 Antenatal care patterns and factors associated with perinatal outcomes in two rural districts in Zimbabwe. *Central African Medical Journal*, 45(11):294-9.

Katzenellenbogen, J & Karim, SA. 2007. *Epidemiology. A research manual for South Africa*. Cape Town: Oxford University Press.

Kitui, J, Lewis, S & Davey, G. 2013. Factors influencing place of delivery for women in Kenya: an analysis of the Kenya demographic and health survey, 2008/2009. *Bio Med Central Pregnancy & Childbirth*, 13(40). Doi: 10.1186/1471-2393-13-40.

Lamminpaa, R, Vehvilainene-Julkunen, K, Gissler, M & Heinonen, S. 2012. Pre-eclampsia complicated by advanced maternal age: a registry-based study on primiparous women in Finland 1997-2008. *Bio Med Central Pregnancy & Childbirth*, 12:47. doi:10.1186/1471-2339-12-47.

Lawn, JE, Cousens, S & Zupan. 2005. "4 million neonatal deaths: When? Where? Why?" *Lancet* 365:891-900.

Levine, MA. 1994. The relationship of poverty to pregnancy. *Midwives' Chronicle* 107(1275):118-120.

Mbaruku, G, Vork, F, Vyagusa, D, Mwakipiti, R, Van Roosmalen, J. 2003. Estimates of maternal mortality in Western Tanzania by the sisterhood method. *African Journal of Reproductive Health* 7(3):84-91.

Mbizvo, MT, Fawcus, S, Lindmark, G & Nystrom, L. 1993. Operational factors of maternal mortality in Zimbabwe. *Health Policy and Planning* 8(4):369-378.

Millennium Development Goals Indicators, The Official United Nations site for the Millennium Development Goals Indicators. Available from:
<http://unstats.un.org/unsd/mdg/Data.aspx> [accessed on: 18 January 2012].

Ministry of Health and Child Welfare (Zimbabwe) 2004. *Neonatal and maternal health survey in Zimbabwe*. Harare.

Ministry of health and Child Welfare (Zimbabwe) 2004a. *Assessment of maternal and neonatal health service in Zimbabwe*. Harare.

Ministry of Health and Child Welfare (Zimbabwe) 2004b. *Reproductive health service delivery guidelines*. Harare.

Ministry of Health and Child Welfare (Zimbabwe) 2004c. *Maternal and Perinatal Mortality Forum*. Harare.

Ministry of Health and Child Welfare (Zimbabwe) 2007. *Zimbabwe Maternal and Neonatal Health Roadmap*. Harare

Ministry of Health and Child Welfare (Zimbabwe). 2008 *Fees and charges*. Harare.

Ministry of Health and Child Welfare (Zimbabwe) 2009. *Maternal and perinatal mortality study in Zimbabwe*. Harare.

Ministry of Health and Child Welfare (Zimbabwe). 2010. *An analysis of notified institutional maternal deaths*. Harare.

MOHCW – see Ministry of Health and Child Welfare (Zimbabwe).

Mouton, J. 2001. *How to succeed in your masters and doctoral studies: a South African guide and resource book*. Pretoria: Van Schaik.

Mudokweny-Rawdon, C, Bezuidenhout, MC & Ehlers, VJ. 2003. Factors influencing pre-eclampsia outcomes in high-risk patients in Zimbabwe. *Health SA Gesondheid*, 8(1):13-25.

Mugweni, E, Ehlers, VJ & Roos, JH. 2008. Factors contributing to low institutional deliveries in the Marondera District of Zimbabwe. *Curationis* 32(2):5-13.

Munjanja, S, Nystrom L, Nyandoro M, Magwali T. 2007 Maternal and mortality study. 2007. Harare: MOHCW.

Mwoyira, K. 1994. Gender issues and reproductive health. *The courier* 147:80-83.

Naidoo & Wills J. 2000. *Health promotion: foundations for practice* 2nd edition. London. Allier Tindal.

National Maternal Health Survey of Zimbabwe. 2004. Harare: MOHCW.

Naude, M & Setswe, G. 2000. *Basic community health nursing*. Johannesburg: Heineman.

Nilses, G, Nystrom, H, Munjanja, S, & Lundmark, G.1997. Trends in maternal mortality for greater Harare maternity Unit. *Central African Journal of Medicine*.2001:47:199-203.

NMHSZ – see National Maternal Health Survey of Zimbabwe in MOHCW 2004

Onega, LL. 2000. Educational *theories, models and principles applied to community and public health nursing* in Stanhope, M & Lancaster. J. 2000. *Community and public health nursing*. 5th Edition. St Louis: CV Mosby (pp265-283).

Osman, NB. Challis, K. Cotiro, M. Nordahl, G & Bergstrom, S. 2001. Perinatal outcomes in an obstetric cohort of Mozambican women. *Journal of Tropical Pediatrics* 47(1):30-38.

PASS – Poverty Assessment Study Survey see MOHCW 2005

Pattinson, RC. 2003. Why babies die:a perinatal care survey of South Africa, 2000-2002: *South African Medical Journal* 93(6):445-50.

Paul, KB. 1993. Maternal mortality in Africa: 1980-1987. *Social Science & Medicine* 37(6):745-752.

Polit, DF & Hungler, BP. 1991. *Nursing research: principles and methods*. 4th edition. Philadelphia: JB Lippincott.

Polit, DF & Hungler, BP. 2004. *Nursing research: principles and methods*. 6th edition. Philadelphia: JB Lippincott.

Polit, DF & Hungler, BP. 1999. *Nursing research: principles and methods*. 4th edition. Philadelphia: JB Lippincott.

Poverty Assessment Study Survey. 2005. Harare: MOHCW.

RHSDG – see Reproductive service delivery guidelines under MOHCW 2004b.

Scott, S & Ronsmans, C. 2009. The relationship between birth with a health professional and maternal mortality in observational studies: a review of the literature. *Tropical Medicine and International Health* 14(12):1523-1533.

Stephenson, R, Baschieri, A, Clements, S, Hennink, M & Madise N. 2006. Contextual influence on the use of health facilities for child birth in Africa. *American Journal of Public Health* 96(1):84-93.

The Reproductive Health Agenda. 2009. Harare: MOHCW.

The Zimbabwean. 2008. December 22:3 [daily newspaper]

Ticconi, C. Mapfumo, M. Dorrucchi, M. Naha, N. Tarira, E. Pietropolli, A. Rezza, G.. 2003. Effect of maternal HIV and malaria infection on pregnancy and perinatal outcome in Zimbabwe. *Journal of Acquired Immune Deficiency Syndrome*: 34(3):289-94.

Trochim, W & Donnelly, J. 2006. *The research methods knowledge base*. 3rd edition. Atomic Dog Publishing.

UNICEF – see United Nations Children’s Emergency Fund

UNFPA – see United Nations Family Planning Association

United Nations Family Planning Association. 2008: State of the world Population. The promise of Equality, Gender, Equity, Reproductive health and the millennium development Goals. UNFPA.

United Nations Children’s Emergency Fund. 2009. The state of the world’s children: maternal and new-born health. New York.

Vallieres, F, Hansen, A, McAuliffe, E, Cassidy, EL, Owora, P, Kappler, S & Gathuru, E. 2013. Head of household education level as a factor influencing whether delivery takes place in the presence of a skilled birth attendant in Busia, Uganda: a cross-sectional study. *Bio Med Central Pregnancy & Childbirth*, 13(48). Doi: 10.1186/1471-2393-13-48.

Whitworth, R & Goldenberg, R. 2012. Home birth attendants in low income countries: who are they and what do they do? *Bio Med Central Pregnancy & Childbirth*, 12(34). Doi: 10.1186/1471-2393-12-34.

WHO – see World Health Organization

World Health Organization. 1999. *Maternal mortality in 1999: estimates*. Geneva

World Health Organization. 2000. *Reproductive health services: an agenda for change*. Geneva.

World Health Organization. 2001a. *Maternal mortality in 1995: estimates*. Geneva.

World Health Organization. 2001b. *Reduction of maternal mortality: a joint strategy WHO/UNICEF/World Bank Statement*. Geneva.

World Health Organisation. 2002. *Antenatal care report of a technical working group. Department of Reproductive Health and Research*. Geneva.

World Health Organization. 2004a. *Maternal mortality in 2000: estimates*. Geneva.

World Health Organization. 2004b. *Beyond the numbers: reviewing maternal deaths and Health Organisations complications to make pregnancy safer*. Department of Reproductive Health and Research. Geneva.

World Health Organization. 2005. *Global database on births attended by skilled health personnel*. Geneva. WHO.

World Health Organization. 2007a. *Safe motherhood: needs assessment*. Geneva.

World Health Organization. 2007b. *Reproductive health matters vol 15: November 30 2007. Maternal mortality and morbidity: is pregnancy getting safer for women?* Geneva.

World Health Organization. 2008. Skilled attendant at birth- 2007 updates. Available at http://www.who.int/reproductive-health/global_monitoring/skilled_attendant;html#definitions [accessed 18 January 2012].

World Health Organization. 2009. *Antenatal care report of a technical working group*. Department of Reproductive Health and Research. Geneva.

ZDHS – see Zimbabwe Demographic Health Survey

Zimbabwe Demographic Health Survey. 1999-2000. Calverton, Maryland: Central Statistical Office and Macro International Inc.; 2001

Zimbabwe Demographic Health Survey. 2005-2006. Calverton, Maryland: Central Statistical Office and Macro International Inc.; 2007

Zimbabwe Demographic Health Survey. 2010-2011 Calverton, Maryland: Central Statistical Office and Macro International Inc.; 2012

Zimbabwe Human Development Report. 2007. Harare: MOHCW.

Zimbabwe Maternal and Neonatal Health Reform Memorandum. 2007. Harare: MOHCW.

Zimbabwean Situation. 2008. November 18:2 [daily newspaper]

ZMNHRM – see Zimbabwe Maternal and Neonatal Health Reform Memorandum

=====



ANNEXURE 2

LETTER REQUESTING PERMISSION TO CONDUCT RESEARCH

Maternal and Child health program (MCHIP)
4 fairman Close , Mt Pleasant.
Harare, Zimbabwe
The PMD Manicaland Province
323 C Avenue, Mutare
Zimbabwe

Dear Sir/Madam

RE: PERMISSION TO CONDUCT RESEARCH

I am The Clinical Training Advisor within The Maternal, Child Health Integrated Programme (MCHIP). I am a registered Master of Public Health (MPH) student at the University of South Africa (UNISA).

I wish to apply for permission to carry out a study on **FACTORS INFLUENCING WOMEN'S PREFERENCE FOR HOME BIRTHS IN MUTARE DISTRICT , ZIMBABWE.** This is part the of the requirement for my MPH degree.

To ensure the highest quality of healthcare before, during labour and after delivery to reduce maternal mortality and mortality and morbidity rates, women should deliver their babies at health care institutions. There thus is a need to learn about women's reasons for preferring home deliveries in spite of attending ANC. These findings could help policy makers and programmers to address any identified issues to enable more women to deliver their babies at healthcare institutions in the Mutare district, and possibly in other rural areas as well.

The findings of this study might assist us to understand why women who use ANC services, do not deliver their babies at the same institutions.

I shall be very pleased if you can grant me permission to carry out the study. Should you have any queries, please do not hesitate to contact me or my supervisor on the contact details provided below.

Yours faithfully

Ms E Muranda (Researcher: tel: 0772 414 340)

Prof VJ EHLERS (Supervisor: tel: +27 12 429 673)

STRUCTURED INTERVIEW SCHEDULE

ANNEXURE 3

STRUCTURED INTERVIEW SCHEDULE – ENGLISH

**INTERVIEW SCHEDULE (ENGLISH)
FACTORS INFLUENCING HOME DELIVERIES IN MUTARE DISTRICT OF
MANICALAND PROVINCE IN ZIMBAWE.**

Good morning/afternoon. My name is Mr/Ms.....I am doing research on factors influencing women’s choices of places for giving birth in the Mutare District of Manicaland Province in Zimbabwe. The results of this study could be used to improve maternity services in this province. I would like to assure you that everything you say will be kept confidential and your name will not be used in any document. You have been selected at random to participate in this study. Your honest participation will assist the researcher to complete this study. There are no right and wrong answers, we need to know how you feel and why you made certain health-related decisions.

May I continue Yes No

If no, please thank the interviewee and stop.

Interviewee No.....
Date.....

Please tick the answer that the respondent supplied, or write her actual answer in her own words on the interview schedule. Kindly indicate clearly in response to which question you write down any ‘verbatim’ response(s).

SECTION 1 – GENERAL INFORMATION

G1 Ward Village
.....
.....

G2
Date of ANC booking
Total number of ANC visits
Gestation at booking

G3
Place of delivery (Please tick)
TBA
Home

SECTION 2 – SOCIO DEMOGRAPHIC FACTORS

2.1 Age in years at your last birthday

- 2.2 Marital Status (circle)
- 1. Never married
 - 2. Married
 - 3. Divorced/separated
 - 4. Widowed
 - 5. Other (specify).....

- 2.3 Parity
How many children do you have?
- 1. Para 1
 - 2. Para 2
 - 3. Para 3
 - 4. Para 4
 - 5. Other (specify)

- 2.4 Number of children
- 1. Live
 - 2. Dead

2.5 Gravida
How many pregnancies did you have?

2.6 When did you last give birth? Date (dd/mm/yyyy)

- 2.7 Highest level of education completed
1. None
 2. Primary education (1-7 years)
 3. Secondary education (8 – 11 years)
 4. High school (12 – 13 years)
 5. Tertiary
 6. Completed university
 7. Other (specify)
- 2.8 Occupation
1. Self employed
 2. Farm worker
 3. Peasant farmer
 4. Unemployed
 5. Employed
 6. Other (specify)

Section 3: How satisfied were you with your visits to the health centre? Please make a cross in the most appropriate box.

	Extreme-ly unsa- tisfactory	Unsatis- factory	Satisfac- tory	Good	Excellent
Welcoming attitudes of nurses					
Friendliness of nurses					
Offering of a seat					
Nurses' talking to you in a way that you are able to understand					
Nurses' listening to you when you are talking					
Patience of the nurses					
Taking of a history from you about your health and pregnancies					
The nurses' physical examination					
Providing general information and explanations of procedures and examinations					
Providing specific pregnancy-related information					
Providing specific information about danger signs and possible complications during pregnancy					

Do you have any suggestions as to how nurses could improve their relationship with the pregnant women at this healthcare centre?

.....

Section 4: AFFORDABILITY (accessibility of maternity services)

	None	Less than \$50	\$100 –\$50	More than Z\$100
Transport fees to and from the health facility				
Payment for ANC booking				
Payment for delivery services				

4.1. Who selected the place for delivery for you You, Husband, In-laws?

SECTION 5 – SOCIO-CULTURAL FACTORS (influencing women’s decisions about places where to deliver their babies

Indicate by a cross in the yes or no block which of the following aspects influenced you in choosing where to deliver your last baby

	Yes	No
“Masungiro” (In Shona culture the first pregnancy must be delivered at the woman’s parents’ house so that she might be given support during labour and baby care)		
The in-laws demanded that the baby be delivered at home to prove that it was their son’s child		
The in-laws demanded that the baby be born at their home so that they could fulfil their cultural rituals		

SECTION 6 - KNOWLEDGE ABOUT SAFE ASSISTED DELIVERIES

Please indicate how important each of the following aspects was for you when you decided where to deliver your last baby

6.1

	Very important	Important	Not important
Clean environment			
Clean home			
Clean hands and body			
Clean surface for delivery			
Clean cutting of the cord			
No interference during labour			

No interference during delivery of the baby and placenta			
--	--	--	--

Please mention any other aspects which you regard as being important for the safe assisted delivery of your baby

.....

.....

.....

6.2

Indicate (by putting a cross in the yes or no block) which of the following aspects will prompt you to seek medical attention during your pregnancy or labour

	Yes	No
Vaginal bleeding		
Severe headaches		
Dizziness or blurred vision		
Generalised oedema		
Convulsions		
Breathlessness and tiredness		
Labour pains for more than 12 hours		
Excessive bleeding in labour		
Ruptured membranes ('water broke') without being in labour for more than 12 hours		
Fever with vaginal discharge after delivery		
Fever without vaginal discharge after delivery		

6.3

Indicate (by putting a cross in the yes or no block) if you received information from the primary healthcare clinic concerning the care of the newborn at the ANC.

	Yes	No
Early and exclusive breastfeeding		
Immunization to prevent childhood illnesses		
Growth monitoring		
Family planning		
Signs, symptoms and treatment of gastro enteritis		

Please mention any other aspects about which you received information with regard to the care of the newborn baby

.....

.....

.....

6.4

Indicate (by putting a cross in the yes or no block) which of the following will make you think that you are developing complications during labour.

	Yes	No
Excessive vaginal bleeding		
Labour pains for more than 12 hours		
Severe headaches		
Breathlessness and tiredness		

Please mention any other aspect that will make you suspect that you are developing complications during labour

.....

6.5

Did you have an emergency delivery kit Yes No

6.6 If yes to question 6.5, please indicate (by making a cross in the yes or no block) if the following supplied formed part of your delivery kit

	Yes	No
New razor blade		
3 cord ties		
Gauze and cotton wool for eye care		
Methylated spirits		
Soap		

Please list any other items that you had in your emergency delivery kit

.....

SECTION 7 – (WOMEN’S KNOWLEDGE ABOUT) HOME VERSUS INSTITUTIONAL DELIVERIES

7.1 How many times were you pregnant?

.....

7.2 To how many babies did you give birth?

.....

7.3 Where did you give birth to your babies? (For example 2 born at home and 1 at a clinic)

.....

7.4 Did any of your babies have problems within one month after birth?

Yes No

7.5 If yes, what kind of problems? (Please specify).

7.6 Where was the baby born who had problems within one week after birth?

7.7 What did you do when you went into labour? (More than one option can be ticked off)

- 1. Decided not to go to the clinic/hospital
- 2. Consulted the traditional midwife in the village
- 3. Asked for help from a relative/friend
- 4. Other (specify).....

7.8 Where did you deliver your baby?

- 1. TBA.s place
- 2. Own home
- 3. Parents' home
- 4. Parents-in-law's home
- 5. Other (specify).....

7.9 Indicate your reasons for not delivering your baby at a clinic/hospital by ticking the relevant block next to each item

	Yes	Unsure	No
Health staff had a bad attitude when you visited during ANC			
You had negative information about the clinic/hospital			
Clinic/hospital fees were too expensive			
I felt safe in familiar environment			
I had a bad experience with the previous delivery at a hospital/clinic			
If yes, please explain the type of experience:.....			

Other reasons that made you choose not to deliver your baby in a hospital or clinic.

7.10

Please indicate your reasons for not delivering your baby in a hospital or clinic

	Yes	Unsure	No
The in-laws demanded that I deliver the baby at their home			
I had nobody to leave at home to care for the other children			
I prefer delivering at home for continued care			
I went into labour at night and had no transport			
The family member who could make the decision for me to go to the hospital/clinic was not available			
The hospital/clinic was too far from my home			
Nurses are rude at the clinic/hospital			
I preferred my own traditional birth assistant (midwife)			
The hospital/clinic was too expensive			
It is our custom to deliver the babies at home			

Other reasons that made me choose to deliver my last baby at home included that:

.....

7.11 What factors do pregnant women consider when they decide where to give birth to their babies?

.....

7.12 Who assisted you during your last baby's birth?

1. Traditional Midwife
2. Mother
3. Mother-in-law
4. Other
 (specify).....

7.13 Did you experience any problems during or after the birth of your last baby?

Yes No

7.14 If yes, what were these problems?

.....

7.15 Who did you consult first for help when you experienced problems during or after the birth of your last baby?

.....
.....
7.16 What treatments were you given to help with the complications?
.....
.....

7.17 Where you referred to other healthcare persons Yes No

7.18 If yes (in reply to 7.17) To whom were you referred? (clinic, hospital, midwife, traditional birth attendant, traditional healer or other?)
.....
..

7.19 Did you consult the clinic/hospital/person (identified in 7.18) to whom you were referred?
Yes No

7.20 If yes, what treatment were you given?
.....
.....

7.21 How long after your last baby's birth did you visit the clinic/hospital?
.....
.....

7.22 Why did you then visit the hospital/clinic?
.....
.....

7.23 What do you suggest can be done to encourage pregnant women to deliver their babies in clinics/hospitals?
.....
.....

7.24 How do you think midwifery services could be improved to encourage more women to deliver their babies in clinics/hospitals?
.....
.....
.....

7.25 Do you have any other comments?
.....
.....
.....

THANK YOU FOR YOUR TIME

ANNEXURE 4

INFORMED CONSENT FORM

I _____ understand that I have the right to revoke this authorisation and withdraw from this interview at any time. Furthermore, I do understand that:

- the information discussed in this interview is strictly confidential and there will not be any disclosure of names or identity
- the information obtained from this interview is for the sole purpose of research and the development of a programme to assist the pregnant women in Zimbabwe
- the research will involve an interview which will take place at the health institutions in the Mutare district
- during the interviews each participant will be asked questions about personal aspects, about her pregnancies and about reasons for delivering her babies at specific places

In the light of this, I hereby volunteer to participate in the study and grant the researcher/research team permission to contact me for the purpose of conducting an interview with me.

PARTICIPANT'S SIGNATURE: _____ DATE: _____

INTERVIEWER'S SIGNATURE: _____ DATE: _____

Table 4.7 Perceptions of the women concerning antenatal care services (N=150)

	Extremely dissatisfied (ED)		Dissatisfied (D)		Total ED+D	Acceptable		Good (G)		Excellent (E)		Total G+E	No reply	
	f	%	f	%	%	f	%	f	%	f	%	%	f	%
Welcoming attitude	22	14.7	45	30.0	44.7	50	33.3	10	6.7	3	2.0	8.7	20	13.3
Friendliness	18	12.0	42	28.0	40.0	47	31.3	14	9.3	2	1.3	10.6	27	18.0
Offering a seat	25	16.7	50	33.3	50.0	33	22.0	8	5.3	3	2.0	7.3	31	
Talking to you in a way you understand	6	0.4	30	20.0	24.0	59	39.3	24	16.0	3	2.0	18.0	28	18.7
Listening to you	12	8.0	64	42.7	50.7	31	20.7	14	9.3	3	2.0	11.3	26	17.3
Nurses' patience	30	20.0	56	37.3	57.3	24	16.0	9	6.0	1	0.7	6.7	30	20.0
History taking	10	6.7	52	34.7	41.4	43	28.7	16	10.7	1	0.7	11.4	28	18.7
Physical examination	16	10.7	37	24.7	35.4	57	38.0	11	7.3	2	1.3	8.6	27	18.0
General information	16	10.7	68	45.3	56.0	27	18.0	8	5.3	3	2.0	7.3	28	18.7
Information on pregnancy	18	12.0	68	45.3	57.3	22	14.7	12	8.0	3	2.0	10.0	27	18.0
Information on danger signs and complications of pregnancy	20	13.3	52	34.7	54.7	25	16.7	20	13.3	6	0.4	13.7	27	18.0