

**COMPARISON OF FACTORS ASSOCIATED WITH UTILIZATION AND NON-
UTILIZATION OF CHILD DELIVERY SERVICES AMONG MULTIPAROUS AND
GRANDMULTIPAROUS WOMEN AT OSHAKATI INTERMEDIATE HOSPITAL
AND NEARBY HEALTH CENTERS, OSHANA REGION, NAMIBIA**

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Abstract

Attendance at antenatal clinic during pregnancy and delivery in health facilities by skilled birth attendants have been shown to reduce the incidence of maternal and neonatal morbidity and mortality. Despite efforts by the Namibian government through the Ministry of Health and Social Services to promote delivery at health facilities by pregnant women, many women still deliver at home resulting in high maternal and neonatal mortality and morbidity in the country. Factors that influence pregnant women to choose either home or health facility as the preferred place of delivery have not been fully explored in Namibia.

The main objectives of this study therefore were to describe the socio-demographic profile of the women attending maternal services and compare the factors associated with choice of home or health facility as the preferred place of delivery by the pregnant women. The study was a cross sectional study conducted among 142 multiparous and grand-multiparous women who were conveniently sampled while attending postnatal care services at Oshakati Hospital, Ongwediva Health Centre and Ou Nick Health centre in Oshana Region.

The findings revealed that 71 (50%) of the women delivered in the health facilities and 71 (50%) delivered at home. The ages of the participants ranged from 17-45 years with a mean age of 30.6 years, with the majority (48%) being those aged 20-29 years. The study revealed that women who delivered at home tended to be younger (mean age 28.13 years) while those who delivered in the health facilities were older (mean age 33.15 years). Those who delivered at home were often single (67.6%) compared with those who delivered in the health facilities (54.9%), and unemployed (81.7% against 35.2%) compared with those who delivered in the health facilities. About 77.5% of those who delivered at the health facilities had secondary or tertiary education compared with 45% of those who delivered at home. Also only 32.4% of those who delivered at home attended the recommended four or more ANC sessions during

the course of the pregnancy compared with 86% of those who delivered in the health facilities. Approximately 75% of those who delivered at home lived more than five kilometers from the nearest health facility compared with 33.8% of those who delivered at health facilities.

The main recommendations that emanates from this study include the need to intensify health education and empower women with information about choice of health facility for safe delivery. Improving access to health facilities through construction of more health facilities in the rural areas and making use of the health extension workers to attend to pregnant women in the local communities will go a long way in reducing maternal and neonatal morbidity and mortality in Namibia. Further research is needed to understand the role of the partners and the communities in supporting women to deliver in the health facilities as well as how provision of kind incentives can encourage more women to make use of health facilities for delivery.

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Acronyms and Abbreviations

AIDS: Acquired Immunodeficiency Syndrome

ANC: Antenatal Care

ART: Anti-retroviral treatment

CPD: Cephalo-Pelvic Disproportion

DHS: Demographic and Health Survey

EMOC: Emergency Obstetric Care

FAC: Focused Antenatal Care

FCI: Family Care International

HC: Health Centre

HEW: Health Extension Worker

HIV: Human Immunodeficiency Virus

IHO: Intermediate Hospital, Oshakati

MDG: Millennium Development Goal

MIS: Management of Information System

MMR: Maternal Mortality Ratio

MOHSS: Ministry of Health and Social Services

NACP: National AIDS Control Programme

NGO: Non-Governmental Organization

PARMaCM: Programme for Accelerated Reduction of Maternal and Child Mortality

PEPFAR: President's Emergency Preparedness Funds for AIDS Relief

PHC: Primary Health Care

PMTCT: Prevention of Mother to Child Transmission of HIV

PNC: Post Natal Care

PPH: Post Partum Haemorrhage

SBA: Skilled Birth Attendant

SDG: Sustainable Development Goals

TBA: Traditional Birth Attendant

UN: United Nations

UNDP: United Nations Development Programme

UNFPA: United Nations Population Fund

UNICEF: United Nations Children's Emergency Fund

WHO: World Health Organization

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Dedication

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Declaration

I, Helena Hidengwa, hereby declare that this thesis titled “Comparison of factors associated with utilization and non-utilization of child delivery services among multiparous and grand-multiparous women at Oshakati Intermediate Hospital and nearby health centres in Oshana Region, Namibia” has been written by me and that it is the record of my own research work. This work or part thereof has not been submitted for a degree in any other institution of higher education. No part of this thesis may be reproduced, stored in any retrieval system, or transmitted in any form or by any means (e.g. electronic, mechanical, photocopying or otherwise) without the prior permission of the author or the University of Namibia.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In almost all societies and throughout history, pregnancy and childbirth has been recognised as a time of increased vulnerability, through which mothers and babies require support, especially from skilled birth attendants or midwives. The midwife is not only about being there but providing the continuity of care, encouraging mothers to remain upright for labour and birth, provide continuous support throughout labour and birth and massage for labour management (Cheyne, 2015). The benefits of Antenatal Care (ANC) to both mother and child include iron and folate supplementation in areas with a high prevalence of anemia, serologic screening for treatment of syphilis, measurement of fundal height to assess the progress of pregnancy, malaria prevention, tetanus immunization and prevention of HIV infection from mother to the child (Fraser et al., 2010). To fully benefit from these interventions, it is important that a pregnant woman enrolls in ANC clinic as early as possible during pregnancy

Moreover, 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 (Sialubanje et al., 2015) However, in some developing countries, including Namibia, 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 (World Health Organisation (WHO), 2014c).

Maternal and child health care services in Namibia are provided by the government through the Ministry of Health and Social Services (MoHSS) in the public health facilities and through the services of private practitioners. These maternal care services are antenatal care, delivery, post- partum, and family planning, while childcare services, especially for children under five years are Immunization and Growth Monitoring. In order to effectively render these services, the MoHSS is divided into 14 operational health regions corresponding to the 14 delimited political and administrative regions. These regions are further divided into 35 health districts. The districts are managed by District Coordinating Committees (DCC) which are responsible for providing basic health care services. In Oshana region, the Maternal and child care services are offered through a comprehensive primary health care approach, which is both the foundation and cornerstone for the provision of basic health care. The region has only one public hospital, Intermediate hospital Oshakati with a capacity of 750 beds, 4 health centres and 10 primary health care clinics. These are the public health facilities for which people, including pregnant women can easily access services. There are 28 outreach points which are frequently visited by mobile district Primary Health care team. Oshana region is in the centre of North West and shares borders with the following regions, Oshikoto to the east, Omusati to the south west and Ohangwena to the north. In terms of land mass is the smallest region with an area of 5290 km²but has a high population density. It comprises of three main towns - Oshakati, Ongwediva and Ondangwa, each with separate municipal councils that govern the town (MOHSS, 2017).

This study investigates factors that might be associated with utilization and non-utilization of antenatal and delivery care services among multiparous women. Globally, these factors might be inadequate availability of health infrastructure and resources, societal norms and attitudes of community and service providers (Jat, Nawi & Sebastian, 2011). In India, women in urban areas expressed high cost, while women in rural areas felt that it is not necessary to deliver in

health facilities (Digambar, Chimankar & Sahoo, 2011). In Africa, it was concluded that factors associated with low utilization of service delivery are poor quality health services, cost of health care, socio-cultural practices, and poor knowledge of mothers on complications of pregnancy and labor as well as poor educational level (Owuso-Danso, 2007). The extent of the problem and the associated factors in Oshana region, Namibia, has not been previously investigated and reported. This chapter therefore presents the background of the study, the statement of the problem, purpose and objectives of the study, and the significance of the study.

1.2 Background of the study

The United Nations Development Programme (UNDP) has initiated Sustainable Development Goals (SDGs) with the new agenda towards 2030, in which goal number three (3) is aimed to ensure healthy lives and promote wellbeing for all at all ages. Under this goal there are subsections, of which subsection 3.2 aims to reduce global maternal mortality ratio to less than 70 per 100 000 live births and neonatal mortality as 12 per 1000 live births. The subsection of 3.7 also states to ensure universal access to sexual and reproductive health care services, including family planning, information and education, and integration of reproductive health into national strategies and programmes (WHO, 2016).

Improving maternal health was one of the eight millennium development goals (MDGs) which was implemented from 2000 - 2015. Though promising progress was made towards achieving Goal four (4) of the MDG by reducing under-five mortality, and Goal five (5) which aimed to improve maternal health, the decline in neonatal mortality remains stagnant, mainly in the middle and low income countries. Also the reduction in maternal mortality did

not reach targeted levels in many countries. Moreover, millions of women in developing countries face life threatening and other serious health problems related to pregnancy or childbirth.

According to WHO (2013), maternal mortality has remained high, since 800 women die from pregnancy or childbirth-related complications around the world every day. In 2013, 289 000 women died during and following pregnancy and childbirth. It was experienced that some of contributing factors to maternal and child mortality are inadequate health care, for instance regions with low numbers of skilled health workers, such as sub-Saharan Africa, especially at remote areas experience highest numbers of maternal and child mortality.

Although antenatal care has increased in many parts of the world during the past decade, only 46% of women in low-income countries benefit from skilled care during childbirth. This means that millions of births are not assisted by a midwife, a doctor or a trained nurse. This probably led to high maternal and child mortality rate as it still remains unacceptably high worldwide, especially in low-resource settings, which could have been prevented in health facilities (WHO, 2015).

Other factors that prevent women from receiving or seeking care during pregnancy and childbirth are poverty, distance, lack of information and cultural practises. It was experienced that health services are difficult to reach, with poor transport and communication systems in some rural areas and cultural beliefs as reasons why some African women still make use of the traditional birth attendants (TBAs) (Fraser et al, 2010).

Since independence in 1990, Namibia has introduced various programmes to address the health needs of women which include antenatal care and delivery services that are rendered countrywide without any charge in public health facilities. However, a survey in 2006/2007 reported that Namibia has a very high maternal mortality rate that might be explained by factors like poor accessibility and availability of services and/or poor quality of care (MOHSS, 2011). According to Ms. K. Uusiku, former Chief Health Programme Administrator at Regional Health Training Centre, Oshakati, negative experiences with previous pregnancy or delivery like a baby passed away or a neighbor or relative died while giving birth in a hospital and negative attitudes of nurses especially towards grand multiparous women and lack of confidentiality may limit utilization of health facilities (personal communication, 31 March 2014).

The researcher has observed a high number of home delivery cases that are recorded in the register in casualty department among multi-parous women who present with complications either to themselves or their babies at the Intermediate Hospital, Oshakati. The breakdown is illustrated in table 1.1 below:

Table 1:1 Home delivery cases presenting at Oshakati Hospital compared to hospital delivery cases, 2010 - 2015

Year	Number of home delivery cases recorded in Casualty register	Number of hospital delivery cases recorded in the Management Information System (MIS), IHO
2010	174	2937
2011	163	3466
2012	160	2740
2013	157	1964
2014	110	1550
2015	113	2644

Source: IHO Casualty Home delivery Register book, 2010-2015 & IHO MIS office.

The data has shown that the number of home delivery cases that are brought to the hospital remains high, though declining over the last six years, with a slight upward trend again in 2015.

After the introduction of the Safe Motherhood Initiative in 1991, maternal and child health care services have been provided through the primary health care system. Mothers are provided with antenatal care during pregnancy, safe delivery health care services during labour, and postnatal care services after delivery (MOHSS, 2010). However, the incidences of maternal and neonatal deaths have doubled in recent years. A woman in Namibia today is almost 100 times more likely to die during pregnancy than a woman in Europe (WHO, 2013). This difference partly reflects Namibia's high rate of HIV/AIDS infection (more than 20 % of

the women at the country's antenatal clinics are HIV positive) and partly reflects limited access to health facilities (Kinsey, 2008).

According to UNICEF's (2014) analytical statement of progress regarding maternal mortality ratio (MMR), there were 385 maternal deaths per 100 000 live births in Namibia based on the Demographic Health Survey (DHS) of 2013. This ratio is not significantly different from those reported in DHS conducted in 1992 (225), 2000 (271) and in 2006-07(449) and indicates that maternal mortality has not declined in the last two and a half decades in Namibia. These demographic indices indicate a dire need for providing more effective delivery services to Namibian women. Despite the fact that maternal health services are available in regional centers across the country, the DHS data collected has shown that only 73% of births to women in the lowest wealth quintile was delivered by a skilled provider, in contrast to 98 % of births to women in the highest quintile. Also, it has been observed that only 80.3% of women living in rural areas, in contrast to 94.7% of women living in urban areas deliver in health facilities. Therefore, a crucial factor is that 10% to 15% of deliveries in Namibia take place at home, without adequate and timely critical maternity care, predominantly in rural areas (UNICEF, 2014).

Moreover Namibia has the world's second lowest population density, with barely two people per square kilometer , which probably contributes to more than 60 percent of Namibia's rural population lives five kilometers or further from a health facility, and many people cannot afford transport to the far away clinics or hospital. Without access to any public transport, impoverished pregnant women from rural communities must travel substantial distances, often over a 100 kilometers to reach the nearest health center. Some set out, but have left too

late, and give birth along the way, while others arrived when complications have set in, and it is too late to save the baby, or the mother (Couillard, 2015).

This reality made some pregnant women to live under trees outside a hospital in largely rural northern Namibia; and they have to survive in the most rudimentary of shelters, while they wait a month, or two, for the onset of labour. Some of the women had been living there five months because they were afraid that they would not be able to reach the hospital in time once they went into labour. For some women they had to walk more than five kilometers to reach medical facility and repeat the journey at least four times during pregnancies and this made them to opt to stay and deliver at home (McLaughlin et al, 2010).

According to WHO's (2014) analytical report, Namibia is ranked 59th in the world for under five mortality, which has decreased between 1990 and 2009 from 73 to 48 deaths per 1000 population. Despite this decrease, the average annual rate of reduction was only 2.2% and the country did not meet either the under-five or infant mortality targets of MDGs. This mortality varies considerably between urban and rural areas, as well as across regions with Ohangwena and Zambezi regions having the highest rates. Since WHO introduced Focused Antenatal Care approach (FAC), which replaced traditional approach in the year 2011, Namibia has implemented FAC approach as it was realized that pregnant women will not need to visit health facilities frequently, and need ANC only four (4) times during pregnancy, unlike with traditional one when they were expected to attend ANC till delivery, which could take even ten times if the mother started earlier in the first trimester. This traditional approach led some women either to start ANC very late or to drop out because of financial constraints and seeing it as a burden to go to the health facilities so frequently. So it was realized that with FAC

pregnant women will receive same decent care and they will be monitored better for any complication as they are few at a time (MOHSS, 2014c).

Additionally, efforts are being made to build capacity and skills of health workers to provide quality essential services to mothers during pregnancy and after delivery through comprehensive Emergency Obstetric Care (EMOC). Another programme is the training of Health Extension Workers (HEW) who are trained for six months to work at hard to reach areas, as one the activities is to support pregnant women and link them with health facilities (Mutseyelwa, 2015). However, in Oshana region home deliveries are still being recorded and from January- June 2016, there were sixty four (64) recorded home delivery cases (IHO Casualty Home Delivery Register book, 2016). This implies that if 10% to 15% of deliveries are not conducted in health care institutions and probably without skilled assistance, then the country cannot do much to reduce maternal and neonatal mortality rates. In case of obstetric complications, a woman in a health care institution could access specialized services more than would be the case for home deliveries conducted by traditional birth attendants (TBAs) or other unskilled attendants such as mothers or mother in-law, who might lack midwifery skills.

A study conducted among 1226 home births 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, 2006, as cited by Mugweni et al., (2008).

Namibia still experiences maternal death cases with direct causes being severe eclampsia (33%), hemorrhages (25%) and obstructed or prolonged labour (25 %). The most common direct complications treated in Namibia in 2006 was obstructed or prolonged labour (38%), despite the efforts that have been made. According to MOHSS, HIV/AIDS is the leading indirect cause of maternal mortality in health facilities, accounting for 37% of total mortality. Other causes include malaria, tuberculosis, meningitis and pneumonia (WHO, 2014a).

The researcher's interest to undertake this study was aroused by maternal deaths in Oshana region. The highest percentage (26.3%) of maternal deaths was reported in Oshana region between January 2008 and May 2010. It is also evident that Oshana region had the highest number of maternal deaths (37 cases) compared to the rest of the surveyed regions (MOHSS, 2011). The recorded maternal deaths at Intermediate Hospital, Oshakati, for the years 2011-2014 shows fluctuations as follow: 2011(18), 2012 (16), 2013 (23) and 2014 (15) respectively. This indicates that maternal death is still a problem in the said region (IHO Casualty Home delivery Register book, 2010-2014; IHO Maternity delivery Register book, 2010-2014). Maternal death is a preventable situation and delivery in the health facility is a way to prevent maternal and child mortality and morbidity.

The Maternal mortality rates are influenced by the interaction of many factors, including the late recognition of the need for medical care in health care facilities and the unavailability of skilled birth attendants. Across Namibia pregnant women still experience the three delays in maternal health care, especially in Oshana, Kavango and Khomas regions. The three delays model is normally used to explain the interaction among factors impacting on maternal mortality in low income countries. The delivery location might be a result of the first and second delays namely, failure to recognize the need for medical care and inaccessible health

care facilities. The woman's choice of a delivery site could contribute to these delays (Mulama, 2015).

1.3 The Problem Statement

Early and scheduled ANC attendance during pregnancy is important to identify and mitigate risk factors in pregnancy, such as detection and early treatment of HIV, for instance, as well as to encourage women to have a skilled attendant at child birth. As it was mentioned earlier maternal and neonatal morbidity and mortality are associated with behavioral risk factors such as low or non-utilization of skilled birth attendance - the skills considered being most important intervention for ensuring optimal maternal and newborn health outcomes. Many maternal and perinatal deaths could be prevented if all women delivered their babies in facilities with adequate resources and staffing that are providing a high quality of medical care (Sialubanje et al., 2015).

This study seeks to identify factors that influence the use of various maternal health care services. In Namibia, the factors that affect the utilization of maternal health services have not been identified and are poorly understood (MOHSS, 2006). It is reported that a large proportion of pregnant women in Namibia seek antenatal care from health facility, but home deliveries in rural areas remain high, and many women are more likely to deliver without assistance (MOHSS, 2011). According to the 2013 National Demographic and Health Survey, 5.2% of the women who delivered in Oshana region delivered outside the health facilities either assisted by relatives or by traditional birth attendants, while 94.8% of the women who delivered in the health facility were attended to by skilled birth attendants (MoHSS, 2013).

Although the proportion of women who deliver outside the health facilities appear to be low, it is still significant considering the problems women and the newborn go through if delivery does not take place in the health facility. This will negatively impact on the plan by Namibia to significantly reduce maternal and child mortality in line with the global trends.

1.4 Purpose and Objectives

1.4.1 Purpose of the study

The purpose of the study was to explore and describe factors associated with utilization and non-utilization of delivery care services among multiparous women and grand multiparous women attending post-partum (for mother and baby) care services at Intermediate Hospital, Oshakati and two health centres in Oshana region.

1.4.2 Specific objectives

The specific objectives of the study were to:

- Describe the socio- demographic profile of multiparous and grand multiparous women attending postpartum care (Mother and baby) services at Intermediate Hospital, Oshakati, Ou Nick health center and Ongwediva health center.
- Describe and compare the factors associated with utilization and non-utilization of Institutional delivery services among multiparous and grandmultiparous women attending Intermediate Hospital Oshakati, Ou Nick health centre and Ongwediva health centre.

1.5 Significance of the study

A number of factors are contributing to the high maternal mortality rate, for instance, unsafe delivery, which mostly occurs outside of health facilities, as it is one of the most challenging and life threatening. This is a widespread health burden and still remains a difficult practice to change in the society. Thus this study will identify and explore reasons on non-utilization of child delivery services by women of high parity in Oshana region, Namibia. Similarly, the identification of these factors will guide the service planners and implementers to understand why women of high parity avoid attending such important, available services and craft intervention strategies accordingly. It is hoped that the findings of the study will be useful in minimizing the problem of non-utilization of ANC and supervised delivery services in Oshana region and country at large as it will identify socio-demographic and cultural factors and practices that may further enhance quality midwifery care. Therefore it will contribute to the formulation of program strategies to promote maternal and child health and reduce maternal mortality thereby allowing women to stay alive and care for their children. It will also help managers to plan strategies on how to increase health facilities deliveries. The researcher did not come across any studies related to home deliveries in this part of Namibia.

1.6 Definition of key terms

The key concepts used throughout this study 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. Homebirth

Homebirth is defined as birth given outside health-care facilities including delivery at home, in a village clinic or on the way to health care facility; it can be planned and attended by midwife or physician or unplanned and mostly attended by family members or emergency department services (WHO, 2011).

1.6.2 Facility-based delivery

A birth attended at a health care facility at a town or higher level (WHO, 2011).

1.6.3 Live birth

Live birth is any birth of a live neonate weighing at least 500 grams at or at least 22 weeks gestation (WHO, 2005).

1.6.4 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 accident or incidental causes (MOHSS, 2012).

1.6.5 Maternal mortality rate

Maternal Mortality Rate (MMR) is a health indicator expressed as a ratio or rate within a country, or within the care institution. The rate is calculated as the number of maternal deaths during any one year per 100 000 live births during the same year (WHO, 2012).

1.6.6 Stillbirth

The birth of fetus that died in uterus and shows no signs of life expressed per 1000 live births (Dippenaar & Serra, 2012).

1.6.7 Neonatal death

The death of a neonate during the first seven days after birth provided that it weighed at least 500 gm at birth or was born after at least 22 weeks of gestation (MOHSS, 2014 a).

1.6.8 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, 2013).

1.6.9 Skilled birth attendant (SBA)

A health care professional with midwifery skills who has been educated and trained to manage pregnancy, child birth, the immediate postnatal period and who can identify, manage and refer maternal and neonatal complications (WHO, 2014c).

1.6.10 Multiparous woman

Multiparous woman is a woman who has had two or more viable pregnancies (Para 2, 3 and more) (Dippenaar & Sera, 2012).

1.6.11 Grand-multipara

Grand-multiparous is a woman who has had five and more viable pregnancies (Para 5 and more) (Dippenaar & Sera, 2012).

1.6.12 Child delivery services

Child delivery services are the services where services for care of pregnancy, delivery and care of the newborn are provided. These services include antenatal care, delivery services and post natal services.

1.7 Structure of the dissertation

This dissertation comprises the following six chapters:

Chapter 1: Introduction and Background information

Chapter 2: Literature review

Chapter 3: Research methodology

Chapter 4: Results of the study

Chapter 5: Discussion of research results

Chapter 6: Summary, conclusion, limitations and recommendations

1.8 Summary

This chapter of the report covered the introduction, background and overview of the study. The research purpose and objectives as well as the significance of the research were also presented. The key terms used in this research were also defined and the outline of what is covered in this report was presented. Chapter two (2) will provide an overview of reviewed literature relevant to factors that might influence women's preference for home or institutional deliveries and how these have been leveraged in other settings to improve uptake of facility-based deliveries.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature that has a bearing on the current research. Literature review helps to lay the foundation and provides the context for a new study. By doing a thorough review, the researcher determined how best to make a contribution to the existing base of evidence, whether there are gaps or inconsistencies, or whether a replication with a new study was done. Reviewing the literature also can help to identify conceptual framework or appropriate research methods. A literature review also plays a role at the end of the study as researchers try to make sense of their findings (Polit & Beck, 2008).

A great deal of research has been done in the area of maternal health, as there is still a continued challenge for the achievement of the third sustainable development goal in sub-Saharan countries, including Namibia. In the developed countries, majority of women obtain good antenatal care and are delivered by skilled personnel, that is, midwives and medical doctors, and this facilitates early detection of complications that occur during pregnancy and delivery. However, even though much effort is being made to realize this objective in the developing countries, many deliveries still take place at homes (Owusu-Danso, 2007).

2.2 Maternal Health Care Globally

In 2013, there was an estimation of 289 000 maternal deaths globally, a decline of 45% from 1990 level. The sub-Saharan Africa region alone accounted for 62% (179 000) of global deaths followed by 24% (169 000) for southern Asia (WHO, 2014), and most of these are

contributed by unsafe delivery. In the developed countries prompt and appropriate measures are put in place to avert maternal and perinatal mortality and morbidity cases. Progress is being made in the developing countries as according to the most recent Demographic and Health Surveys (DHS) in sub-Saharan Africa and Asia, more than 75% of women now deliver in health facilities (University of California, San Francisco [UCSP], 2014). This, however, means that 25% of them probably still give birth outside the health facilities, which is regarded as unsafe.

Although modern midwifery which includes care for the pregnancy up to delivery in a health facility rather than at home was established in Namibia around 1907 at Gobabis in the eastern part of Namibia, it was introduced four years later at Onandjokwe Hospital in the north-western part of Namibia in 1911. Not all the pregnant women could have reached to Onandjokwe Hospital, and it took many years for this service to be accessible to many. Until 1970s, majority of women gave birth at home and were assisted by either relatives or traditional birth attendants (TBAs), as many parts of Ovamboland (north central Namibia) had no access to health facilities with skilled birth attendants (Van Dyk, 1997).

According to Maternal Mortality Ratios (MMR) Country Comparison report (2012), within sub-Saharan Africa, Namibia's MMR are unacceptable high both in facilities and community as it ranked at 56th globally; and as a 9th country in Southern Africa . The mortality rate increased with 7% as from 1992 with 225/ 100 000 live births, in 2000 with 271/100 000, and in 2006 with 449/100 000 (MOHSS, 2010). Such a level is rather too high when compared to the 21 deaths per 100, 000 live births for the developed countries. The high maternal mortality rate is associated with late uptake of ANC services and has limited the ability to efficiently screen and take up appropriate measures. Another challenge is significant

structural constraints which impede the uptake of maternal health services, for example, poor road infrastructure as well limited transportation and furthermore, limited skilled health care providers (MOHSS, 2010).

However, supervised delivery is one of the strategies that the safe motherhood programme intended to reduce maternal mortality and morbidity cases. Even though much effort is being made to realize this objective, most deliveries still take place in homes by untrained TBAs, relatives and other unskilled people and this sometimes results either not only the mother, but also the baby ending up with serious morbidity or death. An example of one lady, 38 years old and in her ninth pregnancy who never gave birth at hospital, lost one of her children as she used unsanitised razor blade to cut the umbilical cord, not aware consequently that she was putting her life and that of her baby at risk (Andima, 2015).

Traditional birth attendants (TBAs) have been the cornerstone of support to mothers giving birth in rural villages throughout developing countries for centuries, including Namibia. A TBA is broadly defined as` a midwife with no formal training, and in Kenya TBAs are valued members of their communities (Carter, 2010).

In the past decades, WHO and other health agencies (UNFPA and UNICEF) promoted training of TBAs in order to improve access to safe delivery and scale up coverage of maternal and reproductive health services. This initiative became a public health strategy as advocated by UNICEF in the 1950s by pursuing provision of delivery kits to TBAs. Supported by the Alma Ata declaration in 1978, efforts were focused to strengthen the links

between traditional birth attendants in the community and the public health systems. However, evidence of increasing maternal mortality rates due to hemorrhage and limited impact of untrained TBA for example, to manage hemorrhage such as manual removal of the placenta, blood transfusion and hysterectomy has led to a rethink on more effective strategies according to Amutenya (2012).

Experience in other African countries has shown that two problems are likely to arise after training traditional birth attendants; one being that they misused sterile gloves. In Namibia, the existing National AIDS Control Program (NACP) policy is not to give out sterile gloves to the TBAs, but they are encouraged to scrub, covering up any cuts and to make use of plastic bags to prevent AIDS infection and transmission. Despite this policy, Shirungu (2010) revealed that if traditional birth attendants have good relationships with their local modern health care practitioners, they may ask for and receive sterile gloves. They are also provided with emergency first aid kits for home-based deliveries and easy access to health facilities if labor becomes dysfunctional. However, this is not the case in some parts of Namibia, mainly in the northern part, as well as in the informal settlements, and this can easily lead to increase in infections not only to the mothers, but to the attendants as well.

Furthermore in Namibia as in other parts of Africa, most traditional birth attendants provide abdominal massage as part of prenatal care which is believed to correct improper position of the fetus, to reduce backache and "waist ache," and to prepare the womb and placenta for delivery (Lumpkin, 2003). Hence, the World Summit for Children Indicators at Indonesia (WSCII) (2002-03) revealed also that ANC coverage is slightly lower for mothers with high parity, who are likely to go to Traditional Birth Attendants (TBAs) for delivery. A study done

in Kenya revealed home delivery is usually conducted by family members or by a TBA (Warren & Mwangi, 2008).

This would probably contribute for some mothers to deliver at home and some bleed to death, rather than seek for skilled birth attendants at hospitals, although efforts to address or treat postpartum hemorrhage and infection at health-care facilities have been made by providing oxytocin and antibiotics.

Culturally in north central Namibia, once the pregnant woman is about to deliver, she is placed into the hut within the household known as '*osakalwa*' in the local Oshiwambo language which means 'hut where women use to make fire with fire woods'. The fire is signifying prosperous life, protection, continuity and perseverance of tradition. In most cases, there are no complications and often the woman giving birth has nobody to assist her, and nevertheless, everything went smoothly (Namupala & Shigwedha, 2006). Based on these beliefs, one would assume that, since this prosperity could not be reached anywhere rather than home, and maybe hospital had been disregarded as appropriate place of delivery, since there is no '*osakalwa*'. According to Dr Naftal Hamata, former Oshana Director of the Ministry of Health and Social Services, in case of cephalo-pelvic disproportion (CPD) or pre-eclamptic condition it was believed that the woman was unfaithful during pregnancy, but not actually for them to think that the delivery environment was not conducive; so many died due to these myths (personal communication, 7th April 2010).

Although it was assumed that to deliver at hospital is more safer than at home, Press Release on High Maternal mortalities in Namibia revealed that eighty (80) mothers died in 2010,

while 62 mothers died in Namibian hospitals during 2011, but these figures excluded those mothers who died at home and those who died after being discharged (WHO, 2013). This means that there is much to do in health facilities as this can create fear among the communities as they feel that to be attended by skilled birth attendant, a mother may still die in their hands, but rather choose to deliver at home. On the other hand, it is also not safe to deliver at home as there are no necessities, for instance blood for transfusion in case of excessive bleeding, so the communities need to be aware of this.

2.3 Historical background of home delivery and transition to hospital delivery

It was revealed that throughout the vast majority of human history, women have always given birth in a familiar place, with family members or other trusted companions and even now, babies are still born at home in most places around the world. Although the move from birth at home to the hospital began in the 18th century, home birth was the norm even in westernized countries until the 1950s. Therefore, humans have been giving birth at home for *999,998 generations*, and it is only in the last two generations that hospital birth has become common. This means that women have given birth at home for *99,998% of human history*. Yet in the United States today, less than 1 percent of births happen in the home (Kressner, 2011).

Although home delivery was regarded as normal since long time ago, maternal conditions, such as hemorrhage, sepsis, and obstructed labour, as a group, constitute one of the leading causes of the burden of disease for women of reproductive age throughout the world and contributed to high levels of mortality and disability in developing regions. According to the estimates of disability-adjusted life years in the 1990 Global Burden of Diseases Study,

reproductive ill-health accounts for 22% of the global burden of diseases among women of reproductive age. Maternal conditions dominate the burden of reproductive ill-health, accounting for 14.5% of the global burden of diseases, particularly in areas such as sub-Saharan Africa and India (Iyengar, Yadav & Sen, 2012).

This burden of diseases could have possibly led the experts during 19th century to come up with ideas to emphasize more on pregnant mothers to deliver at health facilities, where basic necessities that include skilled birth attendants and equipment are available to alleviate or limit these ailments.

Nevertheless, health facilities have been introduced, there were and still exist factors which are attributed or related to women delivering at home. These factors include the onset of labour at night, rainy season, rapid labor, socio-cultural factors and health workers' attitudes, which resulted for the mothers to be assisted in the delivery either by traditional birth attendants, relatives or neighbours or delivered alone. Hence, in Malawi most women went to the health facility the same day after delivery (Kumbani et al., 2013).

Furthermore, it should be also admitted that it is not only availability of health facilities for deliveries that is important, but also the quality of care provided. Emphasis is being placed on the quality of care, not only on availability of services, and the lack of quality care at health facilities limited women's access to quality care. Women delivered in health facilities, but still had poor perinatal and neonatal outcomes because of the substandard quality of care.

A study in rural Tanzania showed that even at higher level facilities where well trained health workers were supposed to be available, women experienced delays in receiving emergency obstetric care and had poor quality of care. Consequently, women experienced severe birth injuries and stillbirths. When women have a choice, they will go to health facilities where they perceive good quality of care, regardless of distance. Forty- four percent of women bypassed their nearest health facility largely because they considered quality significant and will greatly influence where they choose to go for delivery (Gwamaka, 2012).

According to Antony (2010) a quality of care framework reflects both the provision of care and women's actual experience of the care. It is argued that understanding women's experiences of care is critical as it contributes to the use health services and perinatal outcomes. Quality is not the only reason hindering pregnant women to access skilled birth attendance, thus women continue to experience various problems to deliver with the help of skilled attendants. Literature suggests that women encounter socio-cultural factors, perceived benefits, economic accessibility and physical accessibility as barriers to accessing skilled attendance during delivery. Women in sub- Saharan Africa still face limited access to skilled delivery, especially in the rural areas (Kumbani, et al, 2013).

For these reasons some studies revealed that there is a need of scientific approach to be addressed through provision of appropriate perinatal information to raise community awareness (Kumbani, Bjune & Chirwa, 2013). Developing appropriate framework to guide research and implementation of interventions to address various factors that impact on utilization of health facilities by women for delivery is a necessity for researchers and programme managers.

2.4 Conceptual Framework for the Research

The research seeks to explore factors associated with non-utilization of delivery services by multiparous and grand multiparous women. The conceptual framework is developed based on factors that have been identified from the literature that have been shown to act as barriers to utilization of delivery services in health facilities. The underlying thinking is that addressing these factors will motivate more women to utilize health facilities as the preferred place of delivery.

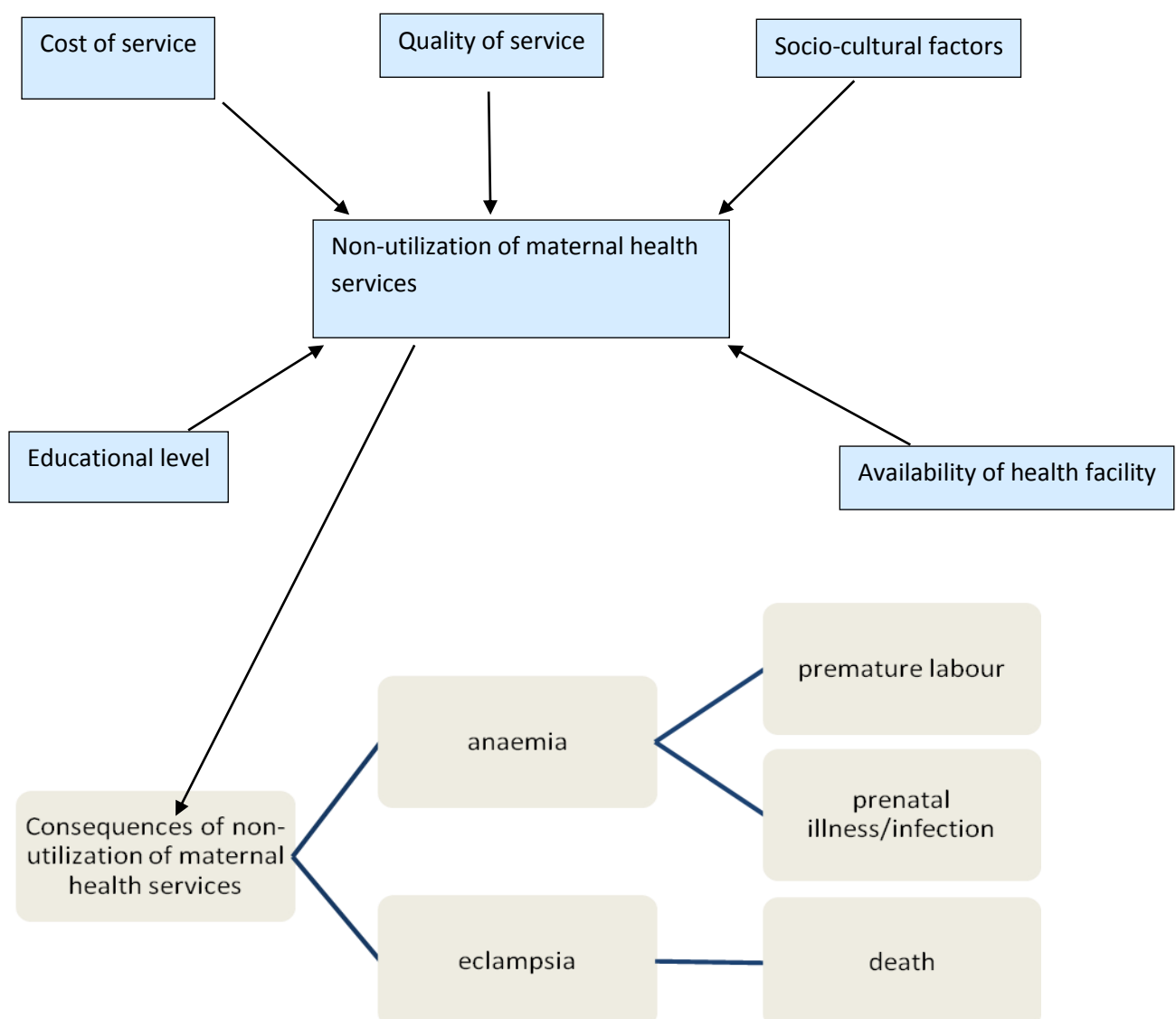


Figure 2.1: Conceptual framework for the study

2.4.1 Explanation of Conceptual Framework

The conceptual framework depicts the fact that a number of factors including availability of health facility, the perceived and actual cost of services, the perceived quality of services at the health facility, the educational level of the women and their partners and other socio-cultural factors play a significant role in the non-utilization of health facilities for delivery. Nevertheless there are other factors which also bring about low utilization of maternal health services such as delays, ineffective referral system, and geographical access. Improvement in the quality of health care, addressing cost of service and other economic factors, addressing beliefs and practices that have a negative impact on the health of women as well as encouraging formal education for girls will all lead to patronage of maternal health services. This in turn will result in the improved coverage of ANC and supervised delivery in the country. Where these factors are not addressed the consequences of non-utilization may include anaemia in pregnancy, perinatal infections, and eclampsia which may subsequently result in maternal mortality (MOHSS, 2014a). In multiparous and grand-multiparous women these issues are critical factors and are further explored below.

2.4.2 Key issues and challenges in multiparous pregnancy and delivery

A retrospective case control study which targeted women who delivered at hospitals in Kwazulu Natal, showed higher rates of ante partum and post-partum complications among the grand multipara compared to the nulliparous. It was concluded that grand multi-parity was not safer compared to other lower parity groups, thus strategies are needed to guide women to seek proper care during pregnancy and, if possible, to avoid pregnancy if they had higher parity (Hoque& Kader, 2008). Similar research findings in rural women of north-eastern Nigeria showed that complications such as uterine rupture, abruptio placenta, mal-

presentations and death are common, with highest rates occurring in grand multiparas (Para 6-9) (Chijioke, 2012). A study done in Jos University Teaching Hospital in Nigeria also indicated that placenta praevia was relatively high in higher parity and associated with high maternal odds of perinatal complications (Anzaku & Musa, 2012).

2.4.3 Factors associated with utilization and non-utilization of antenatal and delivery and post-natal services by pregnant women in health facilities

Factors that influence utilization of maternal health services could be grouped into individual, household and community characteristics. In general, women in high socio-economic groups tend to use maternal health services more frequently than women in the lower socio-economic groups. A study done in India revealed that socio-economic and demographic factors like costs, religion, place of residence, educational level, exposure to mass media, household structure, wealth index, birth order and maternal age have significant influence on the utilization of maternal health care services (Digambar, Chimankar & Sahoo, 2011). As was also stated in the introduction, studies in India indicated factors like poor quality of services, absence of female providers and in some customs, husbands or family members denying their wives or relative to deliver in health facilities also affect women utilizing maternal health services (Jat, Nawi & Sebastian, 2011).

The present study was designed to examine the factors that impacted on utilization and non-utilization of maternal services by multiparous and grand-multiparous women bearing in mind the areas of interest in the literature review from other countries which had been considered as contributing factors on non-utilization of maternal services such as:

- Availability of Health service
- Quality of service

- Cost of service
- Socio- Demographic and Cultural beliefs
- Educational background of mothers

2.4.4.1 Availability and Access to Health Facilities

It is well known that the utilization of maternal health services is undoubtedly influenced by the characteristics of the health delivery including its availability. According to Teyand Lai, (2013) factors that prevent women from receiving or seeking health care during pregnancy and child delivery include inadequate services, especially in rural areas. The World Health Organization (WHO, 2014b) revealed that poorer groups within developing countries use less health care and poor-rich inequalities in maternity care and maternal morbidity and mortality have been associated, especially in South Asia and sub-Saharan Africa. It may be assumed that even under the same condition of availability, some women are more likely to use maternal health services than others. If so, characteristics of health delivery system may not be the only explanatory factors for the utilization of maternal health services.

Other factors such as the social structure and characteristics of individuals should also be considered in promoting the utilization of maternal health services. Studies on health seeking behaviors have identified the importance of the characteristics of the health services such as the availability of services to the general population in determining increased utilization. The focus of such studies is mainly on the supply side of services; increasing the availability and accessibility of the health services is sufficient to increase utilization (Sharad et al., 2014). However, this does not necessarily mean that, where there is a good supply of services, demand is created in and of itself, which will then lead to increased utilization. Thus there has

been a considerable debate in the literature recently as to whether the mere provision of health services will lead to increased utilization (Montagu et al., 2011).

Furthermore, other studies in Malawi argue that the mere existence of health services is not enough to lead to better utilization (Kumbani et al., 2013). Since health care is a consistent choice of individuals, the factors that change women's perception of the available alternatives and their motivation to seek care need to be understood properly. In the case of preventive health care such as maternal health services women must realize the potential benefits of utilizing the services available. An example was found in Afghanistan, despite its accelerated Maternal and Mortality Rate (MMR) reduction efforts, Afghanistan remains one of the world's high MMR countries, with 100 per 100 000 live births in South Asia, while Chad in sub-Saharan Africa is heading globally with 1, 100/ 100 000. Most of the deliveries in these countries take place at home, and the reasons are for instance, being attended by male health workers remained a taboo, liking for big families means some women prefer not to undergo Caesarian Section(C/S) which can limit them to just three or four babies (Harvey, 2011). However according to UNFPA (2015), that situation is changing with professionalization of midwifery and people start to show respect for the health professional. New programmes helped increase the proportion of people living within a two-hour walk of basic health care between 2003 and 2009 and Afghanistan grew from 9% to 85% in access to antenatal services. Today Afghanistan is a regional leader in midwifery profession and managed to reduce maternal mortality in post-conflict setting though not yet at satisfactory level. In 2002, there were only 467 midwives in the country. A decade later, more than 4600 midwives are working in Afghanistan. In a recent report of UNFPA (2015) maternal mortality stood at 400 deaths per 100,000 live births, still among the highest in the world. Maternal mortality in Afghanistan is still unacceptable high, but it is showing significant progress. In 2012, only 23

percent of the need for maternal and reproductive health services was met. If Afghanistan maintains its current graduation rate, only 8 percent estimated need will not be met by 2030.

In Namibia, former First Lady (2006-2015) Penexuhifo Pohamba also admitted that child mortality rate remains unacceptably high in Africa and that Namibia is no exception. She further called on all stakeholders to disseminate information to discourage harmful practices and motivated highly the construction and maintenance of maternity waiting homes as they are in great and urgent demand across the country (WHO, 2013).

If it is found that the non-availability of health facility is the one causing non-utility, it should be understood that the low availability of maternal health services during pregnancy increases the risk for expectant mothers. Thus maternal health services, such as prenatal care, skilled assistance during delivery and post-natal care, along with adequately equipped health institutions, play a major role in the reduction of maternal mortality.

2.4.5 Quality of Maternal Health Services

Quality is a word that has different perspective and meanings to the user. The pregnant woman who accesses maternal services has certain expectations and if these are met will consider the service of quality. The health workers are trained to understand the role and responsibilities during pregnancy, birth and after, develop an increased awareness of the psychological, biological, cultural and social aspects affecting the antenatal care, intrapartum and post-partum periods. At least they should recognize the importance of a genuinely humane approach to care in which the woman and her family are regarded with respect, dignity and confidentiality (WHO, 2002).

However according to Owuso-Danso (2007), it was revealed that there are factors such as that women have fears as they found some health providers unfriendly and hostile towards them and some are forced to be sterilized, because they had too many children. Some health care providers do not treat women with respect or spend enough time and attention on them during labour and delivery and the perceptions women have about health personnel attitude are the following:

- Health personnel shout at and scold pregnant women
- They seem to have no time for the expectant mothers when in labour
- Health personnel look down upon expectant mothers

Another study found that 21% of women delivered at home because of the rudeness of health staff even though delivery in a health facility was safer (Ekirapa-Kiracho, 2014). Many women describe providers in the formal health care system as rude, unsympathetic and uncaring. The health workers are perceived to be hostile and unfriendly, so many women would rely instead on traditional birth attendants for antenatal, delivery and post-partum care. In addition, it was found that traditional birth attendants (TBAs) are more social and sympathetic to mothers compared with midwives. A midwife obtains information from pregnant women while keeping her back turned, and they are usually being reminded by midwives that they are not the one who impregnated them and ended up slapping them. Thus mothers often longed for someone with whom they could genuinely share their visions and problems. They hope to find understanding and communicative people who are really talking, but not arguing (Family Care International [FCI], 2003).

On the other hand, it was experienced that attitudes of midwives from mission and government hospitals are significantly different. Thus those from mission hospital show better positive caring attitudes towards their clients than midwives in government hospital. In fact, this maybe resulted from discipline instilled on the midwives in mission hospitals as the policies that are strictly adhered to in the mission hospital. The study further supported that the good relationship between health workers and pregnant women during delivery can reduce maternal deaths including related complication (Adeyemo, 2013).

In Namibia, the quality of maternal health services was noted by WHO Country Representative in different view that most Namibian women deliver in health facilities, but when complications develop and they need skilled attention, they often lack it. There is a lack of adequate and well distributed numbers of skilled health workers and equipment to provide quality care to pregnant and delivery mothers. In 2000, government adopted the MDGs whose targets were to be reached by the year 2015, and only in 2010 the country developed the National Health Policy Framework for 2010-2020 for the Maternal, Neonatal and Child Health to be among the top health priorities for Namibia (WHO, 2013). The prospect was that it will lead to an increase in rate of skilled attendance at delivery and consequently to a reduction in maternal and perinatal mortality rate, and contribute to poverty reduction. Shortage of skilled personnel can lead to fatal delays in seeking and providing adequate care for pregnancy related complications.

2.4.6 Economic Factors

Economic factors play a significant role in the ability of a pregnant woman to seek maternal health services. Indeed in many countries it may constitute a huge barrier to access to health services. According to Gwamaka (2012), women in the rural areas earn little or no income because they are typically subsistence farmers and the low economic power can hinder women's use of maternal health services, keep women from having hospital-based deliveries or from seeking care even when complications arise. Even when formal fees are low or nonexistent, there may be informal or other unofficial fees or other cost that pose significant barriers to women's use of services. These may include cost of transportation, drugs and food or lodging for the women or the family members who help care for her in the hospital. The high cost of seeking help for pregnancy or delivery related complications can deter women from seeking care and have a devastating effect on household budgets when they occur.

A study in Nepal intended to find out the reasons for women not utilizing delivery services at health facilities in 2013 observed that the higher incidence of home deliveries in the rural areas was because the women felt it was expensive to deliver at the local health facilities (Dahal, 2013). Another study done in Iraq found that cost of health services is one factor which influence the utilization of health services (Siziya, 2009). However in some countries, with the advent of the national health insurance scheme, many women are now making use of the available health facilities. In consequence, maternal health care is virtually free in those settings and only poorer women who cannot afford to enroll in the health insurance scheme are the ones more likely to be affected in the use of health facilities for antenatal and delivery services.

In Namibia, since independence in 1990, Government introduced a policy exempting antenatal care services from user fees. This indicates how the Namibian government realized that financial access or cost of health services constitutes a big problem for most women to access obstetric services. This policy was implemented in all state health facilities. Nevertheless cost of delivery may go up as much as eight times a household monthly income, which include transport, food and other hospital fees. In Nigeria, it was reported that the fee exemption policy by reducing these costs, may play a very important role in increasing the rates of skilled attendance at delivery and protecting households from making catastrophic payments for maternal delivery and consequently from falling into poverty (Owuso-Danso, 2007).

2.4.7 Socio-Cultural factors

In Africa, some barriers for institutional delivery are social roles of wives, as they have to resume home responsibilities soon after delivery; and some women perceived it that it is natural to deliver at home (Magoma, et al., 2010). A study done in Kenya revealed that maternal age had statistically significant relationship with place of delivery as the older women aged 35 and above had greater chance of delivering at home, while the 15 to 24 year old women mostly deliver at health institutions. Older women were however observed to deliver at home confidently due to their experiences with previous birth, while younger women tend to deliver at health facility for fear of complication during childbirth (Owino, 2002). This deals with social or cultural characteristics, value, beliefs and attitudes that may serve as catalyst or barrier to services.

Furthermore, in some communities in Ghana vaginal delivery is recognized as the normal delivery and any other form of delivery is considered as abnormal. A woman who has obstructed labour, for instance, is accused of being an unfaithful woman in the marital home. It would therefore, not be surprising if family members or community members refuse that most women(multi gravida) who had successful home delivery believed that health facility delivery was waste of time (Nanang & Atabila, 2014).

Socially, it has been argued that changes in women's status have been the key to differentiate the behavior of those seeking modern health care from those following traditional practices. In general women with low status are less likely to use modern facilities whereas women with higher status take the initiative in seeking care for themselves and their children. Therefore, there is a strong relationship between cultural beliefs and home delivery (Anthony, 2010). Women with high social status are more likely exposed to media, their partners are educated and they form household quality index, while women with low status are restricted on movement, with low self -esteem and lack community support (Rahman et al., 2008). Some studies revealed that in developing countries the decision to use any kind of health care for women is made at the household level. A woman cannot visit a clinic or hospital without the permission of husband, mother-in-law or the head of the household (WHO, 2014d). Again several studies have found association between women from large families and the low use of health care services, because of too many demands on their time. Large families also cause resource constraints, which have a negative effect on health care utilization (WHO, 2014b).

In Namibia, although the researcher did not come across any studies done on the factors influencing home delivery, it was revealed that the chance of a woman to die during home delivery is high compared with delivery at health facility which is common among

multiparous and grand multiparous women (MOHSS, 2011). Multi-parity can make their cervical opening to less resist the descending fetus if labor begins, unless in cases where there is some degree of cephalo-pelvic disproportion (CPD). If delivery takes place at home in case of CPD, both mother and baby can die, and culturally if a woman had obstructed labor she is usually accused of being unfaithful during pregnancy or had sex with multiple partners. According Ms K.Uusiku, former Chief Health Programme Administrator at the Regional Health Training Centre, Oshakati, culturally, among the Oshiwambo speaking tribe in Namibia, it is a taboo to discuss delivery process and, if a woman died during home delivery nobody can explain what exactly the cause of death was (personal communication, 4th April, 2013).

Addressing harmful cultural practices should be one of the focus areas in antenatal care services. According to Emergency Obstetric and Neonatal Care (EMONC) guidelines, a pregnant woman is expected to attend ANC visits four times at specified intervals as recommended during pregnancy. The first visit is expected to be within first sixteen (16) weeks of gestational age, second visit at 20-24 weeks, the third visit is at 28-32 and while the last one is at 36 weeks of pregnancy and the aim is to monitor the progress of pregnancy to optimize maternal and fetal health. In case of ailments, the woman is referred to the obstetric team for further management, however there is also flexibility to schedule based on change in clinical condition (MOHSS, 2014b).

Multiparous and grand multiparous women are high risk pregnancies that should be identified in antenatal clinics and given a more flexible schedule and focused attention. A retrospective case control study which targeted women who delivered at hospital in Kwazulu Natal,

showed higher rates of ante-partum and post-partum complications among the grand multipara compared to the nulliparous. It was concluded that grand multi-parity was not safer compared to other lower parity groups, thus strategies are needed to guide women to seek proper care during pregnancy and, if possible, to avoid pregnancy if they had higher parity (Hoque et al., 2008). In Namibia, supervised delivery is one of the strategies that the safe motherhood programme intended to reduce maternal mortality and morbidity rate. But, still some deliveries take place in homes by untrained TBAs, by relatives and other unskilled people, especially in the northern part of the country, and this sometimes resulted either in serious morbidity or death (MOHSS, 2011). At the Intermediate hospital Oshakati in northern Namibia, it was observed that most multiparas who were seen for post-partum complications had delivered at home (IHO Records, 2011).

2.4.8 Educational level of mothers

The educational level of the mother is another factor known to influence whether a woman delivers at the health facility or not. Some studies have revealed that pregnant women who have at least attended college are twelve (12) times more likely to deliver in health facility compared to those who have no formal education. On the other hand, pregnant women whose husbands attended college education or higher are three (3) times more likely to deliver in health institution compared to those whose husband had no formal education (Bayu et al, 2015).

Education was found to be a strong determinant of female utilization of health services in a related study (Orabaton, 2014). It is well recognized that mother's educational background has a positive impact on health care utilization. A study in Peru (DHS data, 2008) found a

statistically significant effect of mother's education on the use of prenatal care and delivery assistance. In another study, Becker and colleagues (Bochaberi-Mokua, 2014) found mother's education to be the most consistent and important determinant of the use of child and maternal health services. Several other studies also found a strong positive impact of mothers' education on utilization of health care services (Kabir, Hafiz & Khan, 2013). This means better educated women are more aware of health problems, know more about the availability of health care services, and use this information more effectively to maintain good health status. Mother's education may also serve as a proxy variable of a number of background variables representing higher socio-economic status, thus enabling her to seek proper medical care whenever she perceives it necessary.

2.5 Key interventions and strategies to improve utilization of antenatal, delivery and post-natal services in health facilities

Antenatal care (ANC), delivery and post-natal care (PNC) services should be viewed as a continuum of care. According to Mrisho, (2009) ANC and PNC should focus on addressing geographical and economic access while striving to make services more culturally-sensitive. Antenatal care and PNC can offer important opportunities for linking the health system and the community by encouraging women to deliver with skilled attendant. Addressing staff shortage through expanding training opportunities and incentives to health care providers and developing post-natal care guidelines are key steps to improve maternal and newborn health.

2.5.1 Ante Natal Care (ANC)

Pregnant women in low and middle income countries suffer disproportionately from maternal deaths due to complications of pregnancy. Also neonatal deaths rates are high in these

settings. Improving access to ANC during pregnancy may improve outcome for women and infants because antenatal care is positively associated with pregnant women delivering in health facilities and more babies born of normal birth weight. The WHO recommends that all pregnant women receive at least four antenatal care visits or more, since poor attendances of ANC is associated with delivery of low birth weight babies and more neonatal deaths. Antenatal care may include education on potential problems with pregnancy and child birth, child care and prevention or reduction of disease during pregnancy (Mbuwagbaw et al., 2015).

In Namibia the adoption of Focused Antenatal Care (FAC) services has necessitated the reduction of monthly ANC visits to 4 ANC visits during the course of the pregnancy and cut down on the time and money required for women to access antenatal services. It is through emergency obstetric and newborn care (EMONC) that focused antenatal care has been introduced. This, as defined by WHO (2013), is a new model of ANC based on four goal oriented visits.

This model has been shown to be efficient and more cost-effective, as the health workers spend an average of 46 minutes for first visit and 36 minutes for those revisit clients. The pregnant woman will need only four visits only during pregnancy, unless there is complication and last visit is around 36 or 37 week of gestational age, and this has reduced unnecessary ANC visits (MOHSS, 2014b).

2.5.2 Hospital delivery

Delivery at health facilities with skilled birth attendant has been recommended as the preferred option for pregnant women (WHO, 2014). Community mobilization is necessary to increase facility based deliveries. In Malawi this is done primarily through working with traditional and religious leaders by educating them about safe motherhood. They in turn educate other traditional leaders and their community members and they have also taken the initiative to pass local laws formally prohibiting TBA deliveries. These local laws generally include punishment (a fine of a goat or a chicken for any pregnant woman who delivers with TBA, and TBA who delivers her). The chiefs or community leaders also recruit community volunteers to serve as secret mothers to track all the pregnant women in the community and direct them to attend prenatal care and deliver at the nearest health facility (Presidential Initiative on Safe Motherhood, Strategic Plan, 2012-2016).

2.5.3 Construction/ expansion of maternity waiting homes at health facilities

The WHO has also recommended the use of maternity waiting homes as an effective strategy to address access and utilization of delivery services (WHO, 2014d). The government of Malawi has adopted the strategy and has planned to construct or expand maternity waiting homes either as 24 bed or 36 bed design across the country so that women come to the health facility when they reach their ninth month of pregnancy and wait there until labour happens (MOH Malawi, 2013). This eases the burden of women in labour trying to find transport. Women are frequently accompanied by a female relative who stays in the facility's guardian shelter, a simple shelter designed to provide housing for family members of in patients. The time women are in residence at the waiting homes facilitates their regular check up in the final weeks of pregnancy and presents an opportunity for additional health education.

Maternity waiting homes exist in few facilities in Namibia such as Engela and Okongo Hospitals.

2.5.4 Community midwives

The other strategy being implemented in Malawi is training of new cadre of midwives known as “community midwives”. This program is shorter than the traditional midwifery and they are trained for 18 months rather than 3 years. As these midwives will be less experienced, the plan is that they be placed where they can be supervised by fully qualified midwives. There are some challenges related to the arrangement as there is an overall very high vacancy rate in the midwifery posts. Furthermore, when the program was initiated it was envisioned these midwives would be placed in the community, but there is no infrastructure at that level, no building for them to use as delivery center. There is also no connection to ensure quick safer referral when needed (Presidential Initiative on Safe Motherhood, Strategic Plan 2012-2016).

2.5.5. Integration of other services within the ANC and Delivery Services

According to the Namibia Global Health Initiative 2011-2015/16, one of the major barriers to the delivery of quality care has been the lack of laboratory services in most of clinics and health centers throughout Namibia. Long turnaround has been associated with sending specimen to distant laboratories that has meant that test results are delayed. This delay in turn leads to higher rates of loss to follow-up among ANC clients who cannot easily travel-to-and from clinic. A national Public Health Laboratory Policy and Strategic Plan has strengthened MOHSS oversight of laboratory services, for example, CD4 count test. Through smart integration of the Blood Safety programme in the HIV Prevention Program this has contributed to Maternal Health System strengthening. The United States President’s

Emergency Plan for AIDS Relief (PEPFAR) support to the Blood Transfusion Service of Namibia has also strengthened the delivery of blood transfusion services in Namibia far beyond the program's original HIV prevention mandate. Blood transfusion services- a pillar of EMONC, are now available in 31 health care facilities nationwide with 13 facilities providing full-cross –matching services. Expanded access to quality blood transfusion services has improved doctors' ability to prescribe and patients receive blood when needed. Because labour and delivery wards are large consumers of blood, PEPFAR's HIV prevention investing in blood safety is having a measurable impact on the strength of Namibia's health system and ultimately, the health and well-being of mothers and their babies. Another programme that has been integrated into the antenatal care is the virtual elimination of maternal to child transmission of HIV. The Namibian government launched the prevention of mother to child transmission of HIV (PMTCT) services in 2002 at two health facilities – Katutura and Oshakati Intermediate Hospitals. Since then PMTCT has expanded and integrated into more than 90% of all health facilities offering ANC services nationwide. HIV testing and counseling (an opt-out policy) and the use of rapid HIV testing with same day result are provided in these health facilities. More than 90% of all ANC attendees are tested for HIV and counseled on HIV and PMTCT (MOHSS, 2008).

Furthermore, the establishment and operationalization of the Health Extension Workers (HEW) programme has added some impetus to the mother and child care services in Namibia. This new programme has strengthened the implementation of integrated services. Namibia's health system is largely facility based. Given the vast distances between communities and facilities access to health care is a major challenge. These challenges contribute to worsening health outcomes in terms mortality rates. It becomes critical to bring health services to the community. Today such work is largely done by volunteers funded by

NGO's as found in MOHSS system review conducted in 2006. To address the issue, MOHSS has created a new community based health extension worker cadre that provides an integrated package of services. The HEWs will motivate individuals, families and communities to play a greater role in the improvement of their own health status and seek health services in timely manner. They are also to address high loss – to follow –up of both HIV exposed infants and their mothers and suboptimal ART retention rates. Community based –nurses are providing supportive tracing of mother –infant and ART patients who are in need of and unable to access health facilities. The integration and linkages of these services has greatly improved access to maternal health services for multiparous and grand-multiparous women who are often the most at risk and many of them reside in the rural areas devoid of highly skilled midwives and doctors.

2.6 Summary

In this chapter the research framework was presented and some studies were reviewed pertaining to factors contributing to non-utilization of institutional deliveries among multiparous women in reproductive age in different countries, and in Namibia. Some of the factors identified included age of the women, educational level of the women and their spouses/partners, economic and other social and cultural factors and beliefs. Other contributing factors cited related to access to health facilities, availability of skilled attendants and equipment as well as the attitude of the health workers towards pregnant women in labour. Some strategies employed to improve maternal health services and delivery in health facilities were also highlighted. Chapter three (3) which follows will present the methodology the researcher adopted in this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology the researcher adopted in conducting the research. The research design and the methods, the data collection process and analysis and the ethical issues addressed are covered in this chapter. 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 design, the population and sample and sampling procedures, the research instrument, data collection and analysis procedures are discussed.

3.2 Research design

A research design is a procedural plan that is adopted by research to answer question validly, objectively, accurately and economically. Through a research design, a researcher decides for her/himself and communicates to others the decisions regarding what study design a researcher propose to use, how he/she is going to collect information from respondents, how respondents will be selected, how information collected is to be analyzed and how the findings will be communicated (Kumar, 2011). The researcher applied a scientific approach to the study of a question of interest by moving in a systemic 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 (Bhattacharjee, 2012).

The researcher sought to understand the factors associated with delivery and non-delivery at the hospital and health centres by multiparous and grand-multiparous women. Based on this the considered approach was to collect data from women who had already delivered and analyse the factors. Hence the design chosen was a cross sectional design that collected data from the study participants at a point in time. 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, 2006). This study targeted mothers only who had attended postnatal services at the selected health facilities between August – November 2015.

A quantitative design was used to conduct this study because the researcher was interested in quantifying the magnitude of the contribution of these factors to the problem. This study gathered quantitative information on why women did not deliver their babies at health care institutions as well as those who delivered at health facilities in Oshana region, using structured questions.

Exploratory studies are not intended for generalisation to large populations. They are designed to increase the knowledge of the field of study (Kumar (2011). This study was designed as an exploratory, quantitative, and descriptive, cross sectional study comparing factors related to utilization and non-utilization of health facility of giving birth by multiparous and grand-multiparous women in the Oshana region of Namibia.

3.2 Study Population

Population has been defined as a complete set of elements, either persons or objects that possess some common characteristics defined by the sampling criteria established by the researcher (University of Missouri, n.d.) while Burns and Grove (2007) define a population as a set of entities in which all measurement of interest to the study field is represented. The women who attended postnatal care services at the three selected health care facilities during August – November 2015 in Oshana region comprised the target population for this study. Because of the practical limitation of accessing the target women, the study population for this study comprised a subset of all women who used postnatal care services at study sites which included Intermediate Hospital, Oshakati and Ou Nick health center and Ongwediva health center. The participants included the multiparous and grand multiparous women who have attended services at the specified health facilities during the first six weeks after delivery. This included those who delivered at these health facilities as well as those who did not deliver their babies at these health care institutions but were attending post-natal care services at these facilities within the five months preceding the data collection phase.

3.2.1 Inclusion criteria

This study has included multiparous and grand-multiparous women who have attended maternal and child health care services of Intermediate Hospital, Oshakati and two nearby health centers which are Ou Nick health Centre and Ongwediva during August-November, 2015. Women from gravida two (2) and above, irrespective of their age were interviewed, including those aged less than 15 years. The study also included multiparous who brought their children for other services such as admission and for treatment.

3.2.2 Exclusion criteria

This study excluded women who were critically sick and non-communicative or non-cooperating due to post-partum complications. The study also excluded mothers who did not have antenatal cards or child health passports. Those who attended post-natal services at other health facilities other than Intermediate Hospital, Oshakati, Ou Nick health centre and Ongwediva health centre were also excluded from the study.

3.3 Sample and sampling method

A sample is part of an entire population that possesses attitudes, opinions, habits, or characteristics that a researcher wishes to study (Dattalo, 2008). The appropriate sample size is influenced by the researcher's purpose in conducting the research. According to Dattalo, (2008) it is essential to use the correct sample size that accurately represents the population distribution. Too large sample size is wasteful and sometimes impossible to complete. For proper sampling of the target population the researcher had to determine the total number of multiparous and grand-multiparous women who delivered or were expected to have delivered at the selected health facilities over a one year period in order to estimate the sample size.

3.3.1 Sample size

Before the sample size was calculated, the researcher determined a few things about the target population and the sample that is needed:

- Total number of multiparous and grand multiparous women, was 466 in one year period who delivered at Intermediate Hospital Oshakati, Ou Nick health centre and

Ongwediva health centre, Oshana Region. This number was computed from the delivery register at these health facilities.

- Margin of Error (Confidence Interval) – No sample will be perfect, so the researcher needed to decide how much error to allow. The confidence intervals determines how much higher or lower than the population mean the researcher is willing to let sample mean fall. The researcher adopted the common margin of error of $\pm 5\%$

Confidence level- This is how confident a researcher wants to be that the actual mean falls within researcher's confidence interval. The most common confidence intervals are 90% confident, 95% confident and 99% confident. For this study the researcher adopted the 95% confidence interval.

- Standard Deviation- This is how much variance the researcher expects in participants' responses. The safe decision is for a researcher to use a margin error of 5%, that is, 2 standard deviations; this is the most forgiving number and ensures that researcher's sample will be large enough.

The sample size for this study was calculated using Epi info version 3.5 for cross-sectional descriptive design where a woman's experience/attitude (negative vs positive) with Institutional delivery is taken as exposure factor and place of delivery (health facility vs home) as outcome factor. With an expected frequency of the unfavorable outcome (home delivery) in the unexposed (positive experience) of 30% at an Unexposed to Exposed population ratio of 1:1, we need a total of 142 multiparous women from 466 of target population as a study sample in order to get an odds ratio 2.5 with a study power of 80% at 95% confidence level. Thus the researcher settled for a sample size of 142 multiparous/grand multiparous women.

3.3.2 Convenience sampling

Due to the fact that no register existed for those who delivered at home, the researcher adopted a convenience sampling strategy to select the study participants. The women who delivered in the health facilities are usually given appointment to attend postnatal clinic approximately 6 weeks after delivery and those who did not deliver at the health facilities also bring their newborn babies for immunization at 6 weeks after delivery. The researcher therefore adopted a convenience sampling approach for enrollment of the women in the study over the data collection period as they attended the post-natal clinic. All consenting multiparous and grand multiparous women visiting health facilities for postnatal services (mother and baby) that satisfied the inclusion criteria were enrolled in the study. The enrollment was stopped when the required sample size had been achieved during the study period.

3.4 Research instrument

A structured interview schedule was designed by the researcher, based on information gathered from the literature review. The draft questionnaire was pre-tested on 10 clients. The researcher conducted these 10 interviews. After the pilot some questions were revisited and reorganized for better flow of questions and understanding by the respondents.

The final data collection instrument was structured based on the input received during the pilot of the draft data collection instrument and had 2 different sections:

Section A: focused on socio-demographic data comprising seven items including age, marital status, parity, gravidity, level of education and occupation of the respondents and their place of residence.

Section B: attempted to obtain the obstetric characteristic about the participants including, parity, total number ANC visits, attendant at last delivery, birth outcome of last delivery and place of delivery as well as place of previous deliveries.

3.5 Reliability and Validity

3.5.1 Reliability

Reliability has been defined as the degree of accuracy and consistency with which an instrument measures the attribute it is designed to measure (Polit & Beck, 2010). In undertaking this study the reliability of the research was ensured through pilot testing of the questionnaire and ensuring that all the items in the questionnaire were understood by the respondents. The interviews were conducted by the researcher only and thus ensured that the items in the questionnaire were administered in the same way to all the respondents interviewed.

Cronbach's Alpha for the reliability of the questionnaire items

The researcher developed the questionnaire based on the objectives of the research and literature review. The following variables were considered important factors in choice of place of delivery by pregnant women – age of the woman, educational level, marital status, occupation, place of residence, distance to the nearest health facility, parity of the woman, attendance at ANC clinic and place of delivery of previous pregnancies. These factors were then subjected to reliability testing using Cronbach's Alpha in SPSS. Cronbach's Alpha measures the internal consistency of the factors as shown below:

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha based on standardized items	N of items
.517	.375	9

Cronbach's Alpha tests how the different items in a variable or tool reliably measure the same latent variable. Cronbach's Alpha score varies between 0 and 1. The closer the score is to 1 the more internally consistent the items in the variable or tool.

From the result of the analysis Cronbach's Alpha for the key variables in the questionnaire was .517. This indicates that the variables in the questionnaire were fairly internally consistent as a measure of the factors associated with utilization and non-utilization of child delivery services. A score of less than .5 is usually regarded as unacceptable based on the rule of George and Mallery (2003) as cited by Kroone (2014).

3.5.2 Validity

Validity is the degree to which an instrument measures what it is supposed to measure (Polit & Beck, 2010). Forms of validity include content validity which relates to how the instrument has covered the full content of the research in line with the research objectives, criterion-related validity which focus on the adequacy of the research instrument and the process and constructs validity which relates to how the constructs covered in the research have been comprehensively covered and measured.

In this study the researcher ensured the validity of the research through a thorough review of the literature and developing the questionnaire to cover the research objectives and the important factors that have been identified as having influence on the use of health facilities for delivery by women. The questionnaire were reviewed by the study supervisor and other experienced researchers and the methodology followed were deemed sound in line with the objectives of the research.

3.6 Data collection procedure

The researcher visited study sites and handed over a copy of permission letter from the Ministry of Health and Social Services as well as from Regional Health Director to the registered nurse in charge as well as staff member at ANC clinic to seek their permission and cooperation to collect data at the sites. The purpose and the objectives of the research and what was required from the staff and the study participants were explained to the nurses. The researcher further explained that data will be collected on postnatal clinic days which are held in the three health facilities on Mondays. The researcher then arranged with the nurses at each of the selected facilities to identify the clients who met the inclusion criteria including the home delivery cases and then refer them to the researcher. The nurses at the clinics sent either a short message through the cell phone or phoned the researcher once a client was available who met the criteria. This ensured that normal work at the clinics was not much disrupted.

The data collection was done by the researcher in English for those who could understand English. However, as the researcher spoke the local language (Oshiwambo) fluently and was

able to translate any English words to the local language, the participants who could not speak English were interviewed in the local Oshiwambo language.

The researcher conducted face to face interviews, using the questionnaire which contained close and open ended questions, after the participants received verbal explanation on the purpose of the survey and consented to being interviewed. At the beginning of each interview, the letter of consent was read out to the interviewee and if they agreed to participate, the process began. The data collection from each participant lasted about 20-30 minutes.

3.7 Data handling and analysis

After collecting data from each participant, the researcher checked through the questionnaire for completeness. The questionnaires for each health facility were stored together. The data collection continued until the estimated sample size was reached. Once this was done, the questionnaires were then verified and entered by the researcher into a database created with Microsoft Excel 2010 version with the help of a statistician. The data were then imported into Epi-info version 7 for analysis. Analysis was a two-step process that consisted initially of descriptive statistics based on the demographic and obstetric variables related to the women who delivered at health facilities and at home. The second step in the analysis was finding associations between the demographic and the other variables and the probability of delivering either at home or at the health facility using the odd ratio and the p-value. The odds ratio and the p-value were therefore used to compare and determine the significance of the associations.

3.8 Research Ethics

The permission to conduct the research was sought and obtained from the MOHSS Research Committee after the University of Namibia Postgraduate Research Committee approved the research. Also permission to conduct the research was obtained from the Director of MOHSS, Oshana Regional Directorate and the staff in-charge of the data collection sites. Informed consent was obtained from the research participants by explaining the purpose and objectives of the study and obtaining their verbal consent before interviewing them. The confidentiality has been ensured as the researcher did not provide information to others except supervisors of the study and the participant's name was not collected during the interviews. However information about the participants were verified from their clinic records or that of the babies to ascertain the identity of the participants to satisfy the inclusion criteria.

3.8.1 Protecting the rights of the participants

Informed consent: All the participants in the study were informed verbally about the purpose and objectives of the survey. They were informed that a series of questions related to factors associated with utilization and non-utilization of child delivery services would be asked and they were requested to respond to the items to the best of their knowledge. They were informed that it would take about 20-30 minutes of their time to complete the interview process. At the beginning of each survey, a covering letter of consent has been attached with questionnaire and read out to the participants to obtain their consent. They were informed that their participation in the survey was voluntary and they could withdraw at any time.

Autonomy: Participation in the study was voluntary. The rights of the participants who did not participate or refused were respected. Participants were informed that they can withdraw at any given time from their participation during the survey without any prejudice or any effect whatsoever on their continued access to services at the health facilities.

Beneficence: Participants were informed that there was no direct benefit to them for participating in the study. However the findings from the study will be submitted to MOHSS and may be used to improve services for pregnant women to encourage them to deliver in health facilities.

Non-maleficence: This principle stipulates that care is taken to prevent harm to the research subjects including taking care on questions which asks personal responses that could be emotional. The researcher addressed this by use of proper introduction and explaining how much time will be expected from the participants to answer the items in the questionnaire. They were also assured of their confidentiality. A convenient room in each of the clinics was selected for the interviews and the researcher ensured that the participant felt comfortable before commencing with the interviews and throughout the interview process.

Justice: Each participant in the study was treated fairly and the right to privacy was respected for those who did not want to participate in the study. Fair selection of study participants was assured as all those who met the inclusion criteria were enrolled in the study until the sample size was achieved.

Anonymity and confidentiality: Each respondent's completed questionnaire was assigned a code for anonymity purposes, no individual names were used during the study. Participants' identities were protected in a way that not even the researcher can link a subject with her data. Information collected were kept confidential and not be made available to any other person except when it will be published to the benefit of other researchers but identities of the study participants will still be protected.

3.9 Summary

This chapter has presented the methodology the researcher adopted in conducting the research. The research design was cross sectional, quantitative and analytical using the odds ratio to compare the factors that was important in making the participants choose to deliver either in the health facilities or at home. The data collection instrument and the enrollment procedure were also discussed. The analysis plan and the variables both dependent and independent analyzed were covered. The next chapter will present the findings of the research.

CHAPTER 4

PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents the results of the findings of the analysis of the data which was collected during the research. The findings include socio demographic information of respondents and the factors associated with non-utilization and utilization of health facilities services among multiparous women who delivered at the selected health facilities. The analysis also examined association between the individual factors and the likelihood of the woman delivering at home or at the health facility using the odds ratio and the p-value at the 5% level of significance. The research findings will be discussed under the same heading as found in the questionnaire. There were a total of 142 participants who were enrolled in the study selected from the post-natal clinics at Intermediate Hospital Oshakati, Ongwediva Health Centre and Ou Nick Health Center. Seventy-one of the participants (50%) were those who had home delivery during the last pregnancy and seventy-one (50%) were those who had delivered at the health facilities. The distributions of variables were presented by means of graphs and/ or frequency distribution tables.

4.2 Socio-demographic characteristics of the respondents

The socio-demographic information obtained pertained to the participants' age, marital status, occupation, place of residence, religion, ethnic group and educational level.

Comparison was made for each of these variables between the participants who delivered at home and those who delivered at the health facilities.

4.2.1 Age Distribution

The age range of all the participants in the study was 17-45 years with a mean age of 30.6 years and a standard deviation (SD) of 6.59 years. Among the participants who had home delivery, the age range was 17-43 years with a mean age of 28.13 years (SD 6.0 years) while among the participants who delivered in the health facility the age range was 22-45 years, with a mean age of 33.15 years (SD 6.2 years).

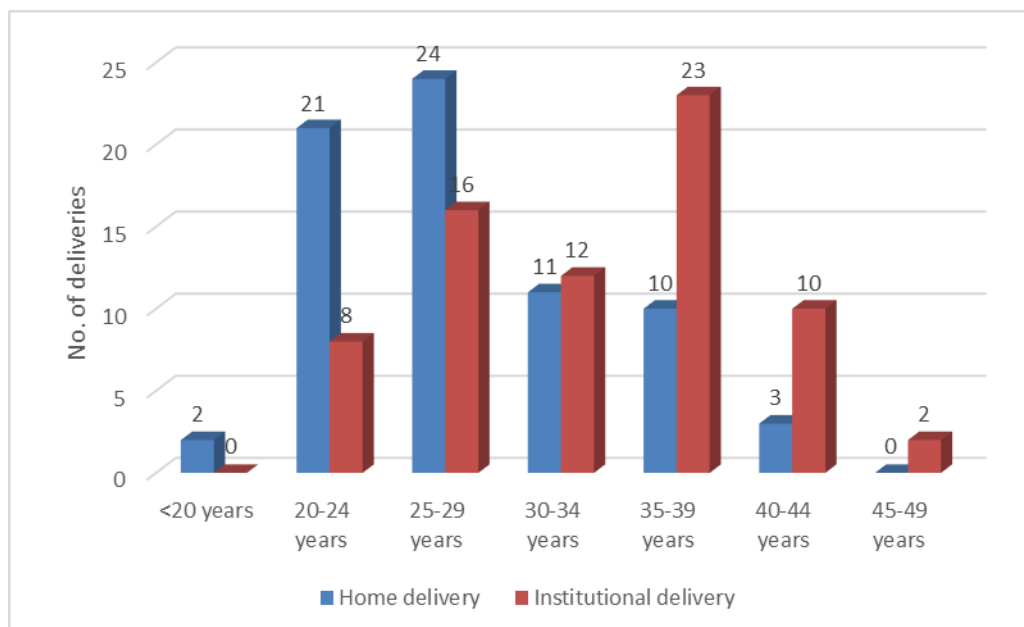


Figure 4.1: Distribution of participants according to age group and place of delivery

The highest proportion of those who delivered at home were those aged 25-29 years while the highest proportion of those who delivered in the health facilities were those aged 35-39 years. Two of the participants who delivered at home were teenagers (aged below 20 years) while among those who delivered in the health facilities twelve (16.9%) were aged 40 years and above. The distribution of the participants according to the age groups is shown in Figure 4.1 above.

4.2.2 Marital Status

The participants were categorized according to their marital status – single/never married, formally married with a certificate, married in traditional way, co-habiting and those who were widowed. Table 4.1 below shows the distribution of the participants according to their marital status.

Table 4.1: Marital status of participants

		Home deliveries		Institutional deliveries		Total	
		No.	%	No.	%	No.	%
Marital Status	Single/Never married	48	67.6	39	54.9	87	61.3
	Married with certificate	12	16.9	15	21.1	27	19.0
	Married in traditional way	1	1.4	1	1.4	2	1.4
	Co-habiting	8	11.3	15	21.1	23	16.2
	Widow	2	2.8	1	1.4	3	2.1
	Total	71	100	71	100	142	100

From table 4.1 above, among those who delivered at home the majority (67.6%) were those who were single while those who were married in traditional way were the least (1.4%). Among those who delivered in the health facilities those who were single constituted approximately 55% while those who were widows or married in traditional way constituted

1.4% respectively. Similar proportion (21.1%) of those who delivered in the health facilities were either married with certificate or cohabiting with the partner.

4.2.3 Occupation of Participants

The graph below shows the distribution of the occupation of the women who participated in the study.

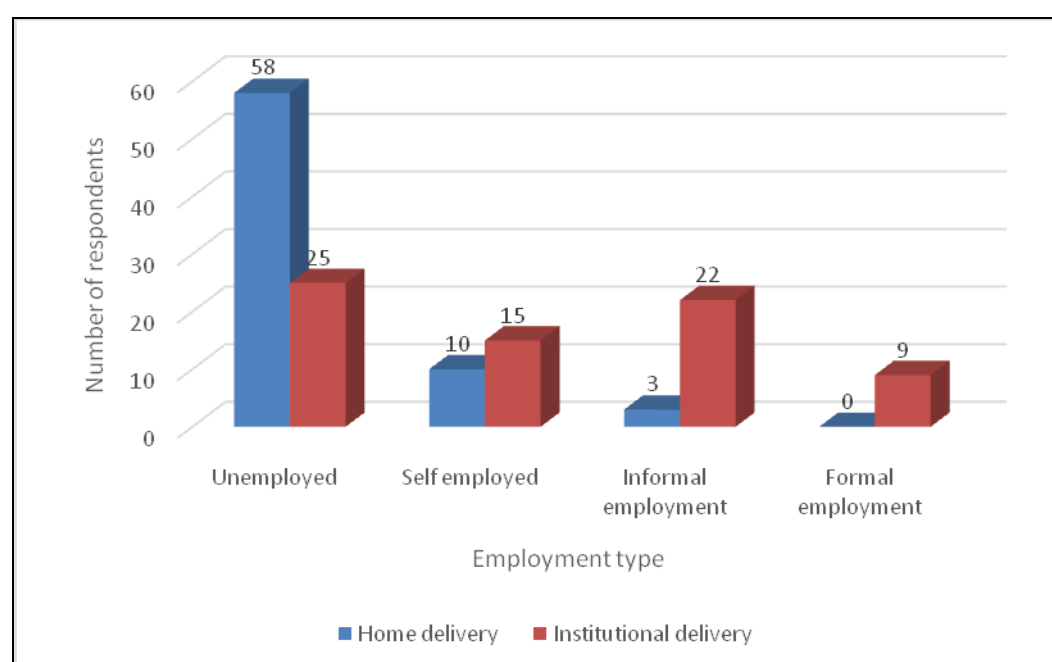


Figure 4.2: Occupation of participants in the study

The study revealed that majority of those who delivered at home ($n = 58$, 81.7%) were unemployed while the rest were either self-employed or employed in the informal sector and none had a formal employment. Among those that delivered in the health facilities 35.2% ($n = 25$) were unemployed while 31% ($n = 22$) were employed in informal sector and 12.7% ($n = 9$) were employed in the formal sector.

4.2.4 Religion and Language group of the participants

All the women who participated in the study were Christians and none indicated belief in any other faith. Approximately 96% (n = 68) of those who delivered at home were Oshiwambo speaking and only 3 women in this group were non-Oshiwambo speaking. Among those who delivered in the health facilities only one woman was non-Oshiwambo speaking while the rest were Oshiwambo speaking women.

4.2.5 Place of residence

The place of residence for participants in the study was categorized into Urban (Town), Peri-urban (Shack) and Rural (Village). The distribution of the participants according to their place of residence is shown in the graph below:

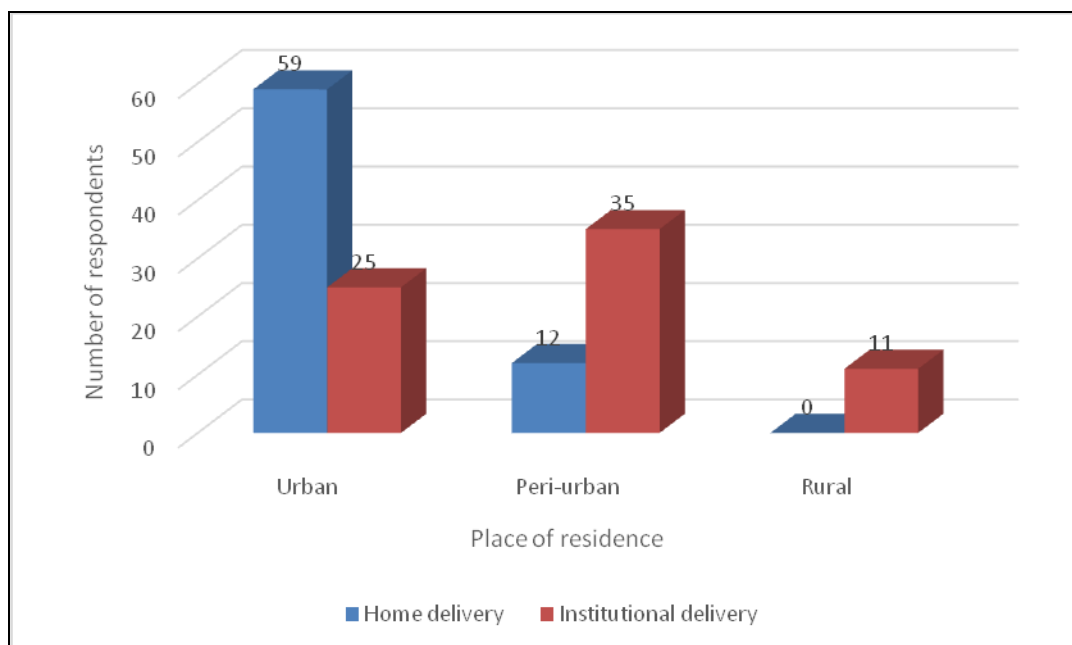


Figure 4.3: Place of residence of study participants

The study has revealed that most of the women who delivered at home were those who lived in urban areas (n = 59, 83.1%) and none resided in the rural area. For those who delivered in the health facilities majority (n = 35, 49.3%) were those who lived in the peri-urban area and eleven (15.5%) were those who lived in the villages (rural area).

4.2.6 Distance from nearest health facility at the time of delivery

The distance from the health facility was classified into two: five kilometres or less and more than five kilometres. For women who delivered at home the research revealed that 74.6% (n = 53) lived more than five kilometres from the nearest health facility while 25.4% (n = 18) lived within five kilometres from the nearest health facility. On the other hand, for women who delivered in the health facilities about two-thirds (n = 47, 66.2%) lived within five kilometres from the nearest health facilities and only about one third (n = 24, 33.8%) lived more than five kilometres from the nearest health facility.

4.2.7 Educational level of the participants

The research examined the educational level of the women who participated in the study for those who delivered at home as well as for those who delivered in the health facilities. The findings are displayed in the graph below (Figure 4.4)

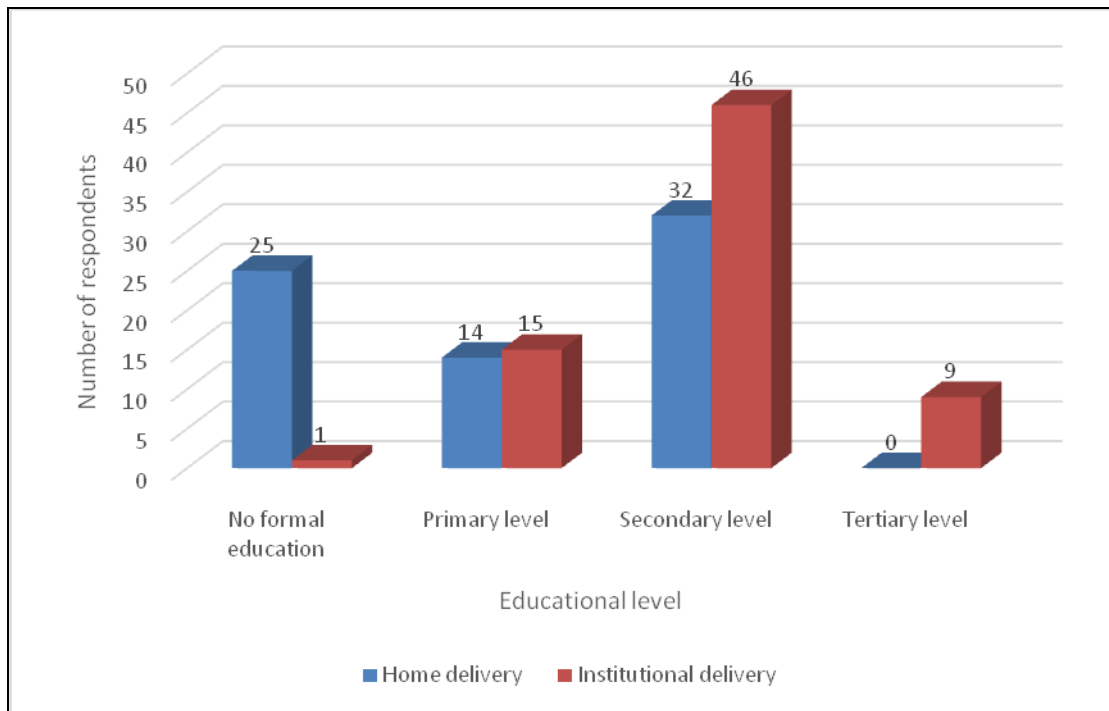


Figure 4.4: Educational level of study participants

The research has revealed that a large number of those who delivered at home had no formal education as against those who delivered in the health facilities ($n = 25$ vs $n = 1$) and none of those with tertiary level of education delivered at home. Those who delivered in the health facilities and had at least a secondary or tertiary level of education constituted 77.5% of the respondents ($n = 55$).

4.3 Obstetric Characteristics of the Study Groups

The study examined the obstetric characteristics of the study participants who constituted the outcome groups. The main factors examined were the parity, number of ante-natal visits during the last pregnancy, the type of attendant during the last delivery, type of delivery, the birth outcome for the mother and the baby and the place of deliveries.

4.3.1 Parity of the Outcome groups

The parity was stratified according to the number of children, with those having more than five children grouped as one. The finding from the research is presented in table 4.2.:

Table 4.2: Parity of the study participants (Outcome group)

Characteristic	Strata	Home delivery		Institutional delivery		Total	
Parity		No.	%	No.	%	No.	%
	2	31	43.7	23	32.4	54	38.0
	3	18	25.4	15	21.1	33	23.2
	4	8	11.3	9	12.7	17	12.0
	5	8	11.3	11	15.5	19	13.4
	>5	6	8.5	13	18.3	19	13.4
	Total	71	100	71	100	142	100

The table above shows that among the study participants who had home delivery majority were those who had two children (n = 31, 43.7%) while the lowest were those who had five or more children (n = 6, 8.5%). For those who delivered in the health facilities majority were also those who had two children (n = 23, 32.4%) and the lowest were those with four children (n = 9, 12.7%).

4.3.2 Number of ANC visits during last pregnancy

The number of ANC visits during the last pregnancy was examined for the two groups and the finding is shown in the chart below.

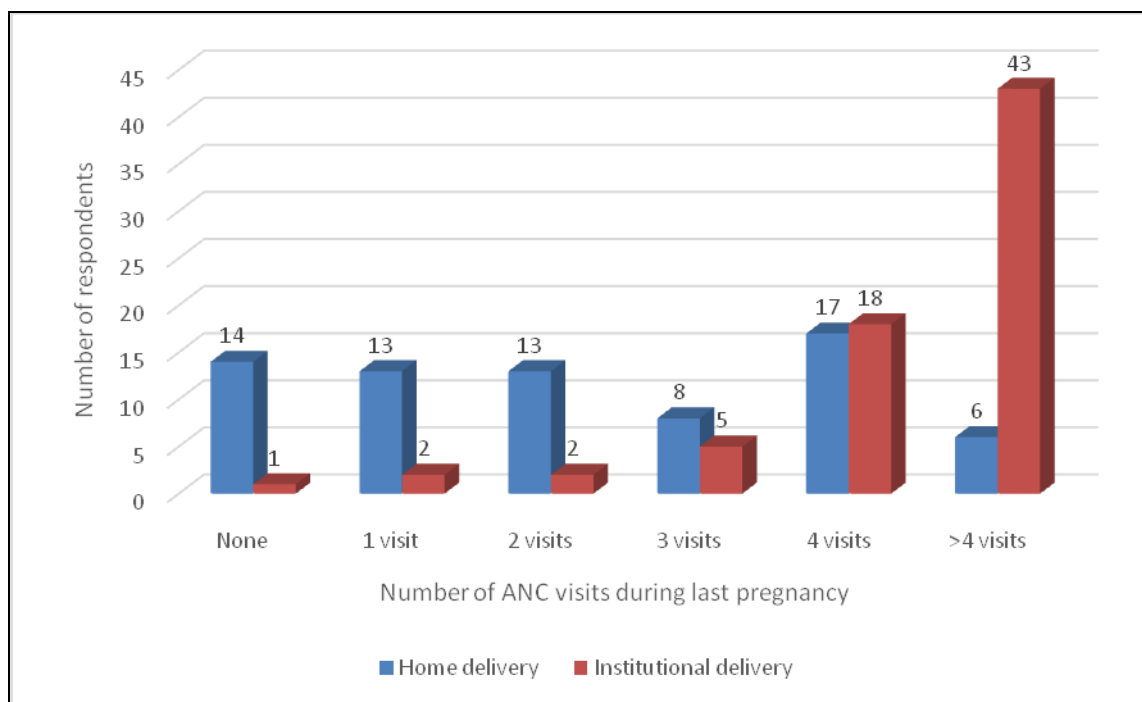


Figure 4.5: Number of ANC visits during last pregnancy for outcome groups

Figure 4.5 above indicates that most of the women who delivered in the health facilities had four or more than four ANC visits during the course of the pregnancy while about 56% (n=40) of the women who delivered at home had two or less than two ANC visits during the pregnancy. Only one woman who delivered in the hospital did not attend ANC during the pregnancy while fourteen of those who delivered at home never attended ANC throughout the pregnancy.

4.3.3 Attendant at last delivery and type of delivery

The research also examined the nature of attendant at last delivery and the type of delivery that the women went through during the delivery of the baby. Table 4.3 summarizes the findings from the study.

Table 4.3: Attendant at last delivery and type of delivery

Characteristic	Strata	Home delivery		Institutional delivery		Total	
		No.	%	No.	%	No.	%
Attendant at last delivery	Skilled	3	4.23	62	87.32	65	45.77
	Semi-skilled	7	9.86	9	12.68	16	11.27
	Unskilled	47	66.20	0	0	47	33.10
	No attendance	14	19.72	0	0	14	9.86
	Total	71	100	71	100	142	100
Type of delivery	Normal vaginal delivery	68	95.8	61	85.9	129	90.8
	Caesarian section	0	0	10	14.1	10	7.0
	Assisted delivery	3	4.2	0	0	3	2.1
	Total	71	100	71	100	142	100

Table 4.3 above shows that majority of those who delivered at home either had unskilled attendant (n = 47; 66.2%) or no attendant at all during the delivery (n = 14; 19.72%). Most of the deliveries in this group were normal vaginal delivery (n = 68; 95.8%). Only 3 of those who had home delivery (4.23%) were assisted during the delivery by a skilled attendant. For those who delivered in the health facilities 87.32% (n = 62) were attended by skilled attendants. Ten of those who delivered in the health facilities went through caesarian section during the delivery.

4.3.4 Birth outcome for the baby and the mother

The birth outcome for the mother and her baby was also examined by the study. The table below presents the findings from this study.

Table 4.4 Outcome for Mother and baby after last delivery

Characteristic	Strata	Home delivery		Institutional delivery		Total	
		No	%	No.	%	No.	%
Birth outcome (Baby)		.					
	Alive & well	61	85.9	69	97.2	130	91.5
	Alive but complicated	5	7.0	2	2.8	7	4.9
	Dead	5	7.0	0	0	5	3.5
	Total	71	100	71	100	142	100
Maternal Outcome	Well	56	78.9	59	83.1	115	81.0
	Complicated	15	21.1	12	16.9	27	19.0
	Total	71	100	71	100	142	100

The study revealed that 85.9% (n = 61) of the women who delivered at home indicated that their babies were alive and well and five each of the women reported that their babies were alive and complicated or dead respectively. For the women who delivered in the health facilities 97.2% (n = 69) reported their babies alive and well while only two women stated that their babies were alive but complicated and none of the women had a dead baby.

Fifteen of the women (21%) of those who delivered at home stated that they had some complications of their own while only 12 (16.9%) of those who delivered in the health

reported having complications. Majority of those who delivered either at home or in the health facilities stated that they were well after the delivery.

4.3.5 Place of previous delivery

The study also looked at where the women in each group have had their previous deliveries.

Table 4.5 below shows graphical distribution of place of previous deliveries as reported by the women in each group

Table 4.5: Comparison of place of delivery during last pregnancy against place of previous deliveries

	Place of delivery of last pregnancy						
		Home		Health facility		Total	
		Number	%	Number	%	Number	%
Place of previous deliveries	Home	6	8.5	0	0	6	4.2
	Health Facility	45	63.4	60	84.5	105	73.9
	Both	20	28.2	11	15.5	31	21.8
	Total	71	100	71	100	142	100

The study revealed that majority of the women in the study have had previous deliveries in the health facilities among those who delivered at home or in the health facility during the last pregnancy (63.4%; n= 45 and 84.5%, n = 60, respectively). Six of those who delivered at home during the last pregnancy had previously delivered at home while none who delivered in the health facility during the last pregnancy previously delivered at home.

4.4 Association between individual socio-demographic characteristics and place of birth

The researcher tested for association between individual socio-demographic variables and place of birth using the odds ratio and significance test. The variables examined were age of the participants comparing those aged less than 30 years to those 30 years and older, marital status comparing the single to those who were married/cohabiting or widowed, place of

residence comparing those living in rural areas to those living in urban and peri-urban areas as well as level of education of the women, comparing those who had no formal education to those with some formal education. The findings from the analysis are shown in table 4.6:

Table 4.6 Association between individual socio-demographic characteristics and place of birth (N = 142)

Characteristics	Strata	Home deliveries		Institutional deliveries		Odds Ratio	95% CI	Sig. test and p-value
		No.	%	No.	%			
Age	<= 29	47	66.2	24	33.8	3.8	1.9-7.7	14.8, p-value <0.01
	30+	24	33.8	47	66.2			
	Total	71	100	71	100			
Marital status	Unmarried	48	67.61	39	54.93	1.71	0.86-3.41	2.39, p-value = 0.06
	Married/co-habiting/widowed	23	32.39	32	45.07			
Residence	Rural (village)	59	83.10	25	35.21	8.88	4.10-20.21	33.46, p-value < 0.01
	Urban/Peri-urban (Town/Shacks)	12	16.9	46	64.79			
Mother's education	No formal education	25	35.21	1	1.41	37.31	6.6-799.5	29.92, p-value <0.01
	Formal education	46	64.79	70	98.59			

4.4.1 Association between age of the mother and place of delivery

The association between the age of the woman and the place of delivery was tested using the odds ratio to examine the likelihood of the woman delivering at home or in the health facility.

The age group was stratified into two: those 29 years and below and those 30 years and above. Analysis revealed that the odds ratio comparing home vs institutional delivery was 3.8 and this was highly significant with a p-value of <0.01 . Therefore the odds of a woman having institutional delivery was much higher for those 30 years and above compared to those aged 29 years and below.

4.4.2 Association between marital status and place of delivery

Marital status was classified into those who were unmarried against those who were married/cohabiting/widowed. Analysis revealed that the odds ratio comparing those who were either married, cohabiting or widowed against those who were single or unmarried was 1.71 with a 95% confidence interval of 0.86-3.41 and a p-value of 0.06. Therefore there was no significant relationship between the marital status of the women and the place of delivery.

4.4.3 Association between place of residence and place of delivery

For this analysis the place of residence was stratified into two: Rural (Village) and Urban/Peri-urban (Town/Shack). Analysis revealed that the odds ratio was 8.88 with a 95% confidence interval 4.10-20.21 and p-value of <0.01 . Therefore the odds of a woman delivering in the health facilities was significantly higher for women who lived in the town and peri-urban areas than for those who lived in the villages or rural areas.

4.4.4 Association between mother's level of education and place of delivery

The researcher also tested to check if there was any relationship between the mother's level of education and the likelihood of delivering either at home or in the health facility. Level of education was stratified into two: those with no formal education and those with some formal education (primary, secondary and tertiary). Analysis revealed that the odds ratio was 37.31 with a 95% confidence interval 6.6-799.5 and a p-value <0.01. This demonstrated a highly significant relationship between level of education and giving birth in the health facility. Therefore having formal education is highly associated with giving birth in the health facility.

4.5 Association between individual obstetric characteristics and place of delivery

The individual obstetric characteristics that were tested for any possible association with the place of delivery were the woman's parity, attendance at ANC during last pregnancy, place of previous delivery and type of delivery. Analysis was also done to determine if there was any association between the distance of the woman's residence at the time of delivery and the place of delivery. The finding from the analysis is shown below in Table 4.7:

Table 4.7 Association between Individual Obstetric Characteristics and Place of delivery, N = 142

Characteristic	Strata	Home delivery		Institutional delivery		Odds Ratio	95% CI	Sig. test and p-value
		No.	%	No.	%			
Parity	2-3	49	69.01	38	54.29	1.87	0.94 – 3.76	3.21, p-value = 0.038
	4+	22	30.99	33	45.71			
ANC visits last pregnancy	None	14	19.72	1	1.41	16.94	2.87-371.79	12.51, p-value <0.01
	At least one	57	80.28	70	98.59			
Place of previous delivery	Home	6	8.45	0	0	1.61	Undefined	6.22, p-value = 0.007
	Health facility/both	65	91.55	71	100			
Type of delivery	Normal vaginal delivery	68	95.77	61	85.92	3.68	1.02- 17.31	4.11, p-value = 0.02
	Caesarian section/Assisted delivery	3	4.23	10	14.08			
Distance from health facility at time of delivery	<=5km	18	25.35	47	66.20	0.18	0.08 – 0.36	23.69, p-value <0.01

4.5.1 Association between Parity and place of delivery

The parity of the woman at the time of the pregnancy was classified into two strata: those with 2-3 previous pregnancies and those with 4 or more previous pregnancies. Analysis revealed that the odds ratio was 1.87, with 95% confidence interval 0.94-3.76 and a p-value

0.038. Based on the confidence interval of the odds ratio it can be concluded that there was no significant relationship between the parity of the woman and the choice of place of delivery.

4.5.2 Association between ANC visit during last pregnancy and place of delivery

The number of ANC visit for the purpose of this analysis was stratified into two: No ANC visit and at least one ANC visit during the pregnancy. Analysis revealed that the odds ratio was 16.94 with a 95% confidence interval 2.87-371.79 and a p-value <0.01 . This indicated a highly significant relationship between attendance at ANC clinic and the likelihood of delivering in the health facility, meaning the more a woman attends ANC the higher the chance of delivering in a health facility.

4.5.3 Association between place of delivery in previous pregnancies and place of delivery in the last pregnancy

For this analysis the researcher grouped place of delivery in previous pregnancies into two: Home only and health facility/both health facility and home. The odds ratio was estimated at 1.61 and the p-value given as 0.007 (less than 0.05) which was highly significant. This demonstrates that there was a highly significant relationship between the place of previous delivery and the place of delivery for the last pregnancy. Women who delivered at home before were more likely to deliver at home during the last pregnancy and women who delivered previously at the health facility or at both health facility and home were more likely to make use of the health facility in the last delivery.

4.5.4 Association between type of delivery and place of delivery

The type of delivery was classified into two for this analysis: normal vaginal delivery and assisted delivery/caesarian section. Analysis showed that the odds ratio was 3.68, with 95% confidence interval 1.02-17.31 and a p-value of 0.02. This indicates that women who required assisted delivery or caesarian section had a higher chance of delivering in the health facility than those who had a normal delivery.

4.5.5 Association between distance from health facility at time of delivery and place of delivery

The researcher also sought to understand if there was any relationship between the distance of the residence of the woman at the time of delivery from the health facility and the choice of place of delivery either home or health facility. The distance from the health facility was stratified as 5km or less and more than 5km. Analysis revealed that the odds ratio was 0.18 with 95% confidence interval 0.08-0.36 and a p-value <0.01. This can be interpreted that if a woman lived less than 5km from the health facility the odds of delivering in the health facility was much higher than delivering at home.

4.6 Summary

This chapter presented the findings from the research based on the data analysis done. Altogether there were 142 women who participated in the study, 50% of who had delivered at home and 50% delivered in the health facilities during the last pregnancy. The participants ranged from those aged 17-45 years with a mean age of 30.6 years. Those aged 25-29 years constituted the majority of the participants in the study. Those who were single or unmarried

constituted 61.3% of the participants. Most of the women in the study were unemployed constituting 58.5% of the study participants while those in formal employment formed only 6.3%. The study has revealed that those who delivered at home were more likely to be unemployed as 58 out of 71 of those who delivered at home (approximately 82%) were those who were unemployed.

The study has also revealed that those who had no formal education and those who did not attend ANC during the pregnancy or had previously delivered at home were more likely to deliver at home than in the health facilities during the last pregnancy. Distance of less than 5km from the nearest health facility at the time of delivery and being resident in the town or peri-urban area seemed to be positively associated with delivery at the health facilities but no significant relationship was found between the parity of the woman and the choice of place of delivery. The next chapter will discuss these findings from the research.

CHAPTER 5

DISCUSSION OF THE FINDINGS

5.1 Introduction

This chapter presents the discussion of the findings pertaining to this research. The purpose of the research was to explore and describe factors associated with non-utilization of delivery care services among multiparous women attending postpartum service for mothers and babies at Intermediate Hospital, Oshakati. The researcher employed a comparative analysis of the factors among women attending post-natal clinic services at the three selected health facilities to identify which factors were associated with delivery at the health facilities or at home. Once these factors are identified the health care institutions and planners may design interventions aimed at decreasing the number of home deliveries in Oshana region in order to reduce maternal and infant mortality and morbidity rates in the region. The discussions centre around key findings based on the research objectives which were to:

- Describe the socio- demographic profile of multiparous women attending postpartum care (Mother and baby) services at Intermediate Hospital, Oshakati, Ou Nick health center and Ongwediva health center.
- Describe and compare the factors associated with utilization and non-utilization of Institutional delivery services among multiparous women attending Intermediate Hospital Oshakati, Ou Nick health centre and Ongwediva health centre

5.2 Factors associated with delivery or non-delivery at health facilities

5.2.1 Socio demographic factors

The study has revealed that highest percentage(33.80%)of those who delivered at home were those aged between 25-29 years with a mean age of 28.13 years while the highest proportion of those who delivered in the health facilities (14.08%) were those aged 35-39 years with a mean age of 33.15 years. Two of the participants were teenagers and both had home deliveries. What can be gleaned from this is that those who delivered at home tended to be younger women than those who delivered in the health facilities. Home delivery for young women and teenagers portends great danger for the women as it may result in maternal and perinatal morbidity and mortality. Obstetric complications are more likely to happen among young women who get pregnant and the older women who become pregnant as well. Women, aged 35 and older, should deliver their babies in the hospital or clinics, because these older women are more prone to encountering obstetric emergencies than their younger counterparts. Fraser, Cooper and Nolte (2014) maintained that if the maternal age exceeds 35, especially if coupled with parity five or greater, it poses increased risks of perinatal mortality, obstetrical complications, including post-partum hemorrhage. Indeed since the adoption of the safe motherhood programme in Namibia in 1998 and recent efforts aimed at accelerating the reduction of maternal mortality in Namibia, all pregnant women irrespective of parity are encouraged to deliver at health facilities with skilled birth attendants.

Although the number of teenagers who became pregnant and included in this study are few, teenage pregnancy is common in Namibia and presents challenges to the health system. UNFPA (2008) maintains that a teenage pregnancy is a crisis situation as it complicated by factors like interrupted education or career pursuits, and lack of family acceptance or paternal support complicated by increased medical risks during pregnancy and by the premature baby

at this young maternal age. The immature physique of teenagers might cause obstetric emergencies and these women should deliver their babies at health care facilities (Otto, 2015). Moreover, the young one may experience a lot of emotions, like worrying about telling parents and anxiety about pregnancy and child birth which probably may contribute to them being delivered at home or alone (NHS, 2015).

The finding that younger women are more likely to deliver at home than in the health facility is similar to the findings of a study done in Nigeria which reported that women who were 25 or younger are more likely not to use maternal services. Similarly the finding that a high proportion of those delivered in health facilities were 35-39 years old rhymes with a study carried out in Peru which found out that older women were found to be more likely to use maternal services, and the authors went further to suggest that this may have been due the older women having more knowledge and placing more value on modern health care (Dairo & Owoyokun, 2010). However, a study done in Zimbabwe seemed to contradict their finding and reported that many women aged 30-39 year age group reportedly delivered at home (Mugweni et al, 2008). However, if women fail to deliver at health care institutions, they might be unable to make use of timely referrals to other health care institutions which render the required care that might save these women's and or their new born babies lives and/or prevent maternal and /or neonatal morbidities (WHO, 2015). The findings from the present study appears to confirm theoretical findings in Uganda by Aminah, (2010) in her study that a woman's age might influence her decision to initiate maternal services late or not to attend these services at all.

Marital status of the respondents was another factor that the researcher examined to understand its impact on the choice of place of delivery among the respondents in this study. The result of the study has shown that many respondents are unmarried regardless of their place of delivery, so there were no significant differences in of this study between the women who delivered their babies at home compared to those who delivered at health facility concerning their marital status. Thus marital status did not seem to play a significant role in the women's choice of place of delivery in this study. Nevertheless, being married in some contexts may provide a pregnant woman the social, emotional, psychological and financial support to enable the pregnant woman access maternal services in a health facility. Those who delivered at home might have lacked social support and means to enable them use maternity health services. A similar study done in Nigeria revealed that single mothers most of the time did not use maternal services as it was reported that they do not take part in decision making on matters that concern their health, a probable lack of support and inability to determine matters concerning their health might explain their limited use of maternal care service (Dairo & Owoyokun, 2010). Moreover, a study done Ethiopia further revealed that women who conceive out of wedlock were possibly less motivated to attend maternal services due to community stigmatization and marginalization and even health providers' discriminatory attitudes (Tsegay et al., 2013). However, stigmatization and discrimination of single mothers do not appear to happen in Namibia. Majority of the women who participated in this study were unemployed and 81.7% of those who delivered at home were unemployed while only 12.7% of those who delivered in the health facilities were employed in the formal sector of the economy. This finding did not indicate a significant relationship between the occupation of the woman and place of delivery. However, being gainfully employed confers economic empowerment to the woman and may positively influence her decision to utilize health facilities for delivery. What the finding from this study has hinted at is the high rate of

unemployment in Oshana region, as out of 70,150 in the employable population, 26,073 active people are unemployed according to national statistics (Namibia 2011 Population & Housing Census main report).

This implies that many of the respondents who delivered at home might have encountered financial difficulties if they needed transport to a hospital or clinic. This is similar to findings from a study conducted in Kenya which reported that physical access to health facilities through distance and /or lack of transport, and economic consideration are important barriers for women to delivering in a health facility in Kenya (Kitui et al., 2013). Indeed in the present study the researcher has found out that 74.6% of those who delivered at home lived more than 5 kilometres from the nearest health facility.

Another significant finding from the present study was the relationship between the educational level and occupation of the respondents and the place of delivery. The study found that those who had secondary or higher level of education were more likely to deliver at the health facilities (n=46 (64.79%)) while those who had no formal or primary education were more likely to deliver at home (n=25 (35.21%)). Having secondary or tertiary education was found to be a significant predictor to use institution as a place of delivery (OR 29.92, p-value<0.01). Women who had secondary or tertiary education might be better exposed to the health education programmes on the need for delivery at health facilities and understand better the dangers of home delivery. Also having a secondary or tertiary education places a women in a better position to secure employment and better economic power to overcome the financial constraints to health facility delivery as the analysis in this study pointed out that

women who delivered at home were either unemployed or did menial jobs while those who had formal employment were more likely to deliver at the health facilities

The finding that women with secondary or tertiary education were more likely to deliver in the health facilities than those with no formal or primary education is similar to the findings of several studies in Ethiopia by Tsegay et al. (2013), Zimbabwe by Mugweni et al. (2008) and Tanzania by Gwamaka (2012) which revealed that there is a significant relationship (influence) between mothers' education and utilization of ANC and delivery services (OR 29.92, $p\text{-value} < 0.01$). Educating a woman therefore plays an important role in her empowerment and decision to use maternal and child care services in the health facilities. The findings above are also in line with a study done in Ethiopia by Mekonnen, Ayichiluhm and Dejen (2015), and in Kenya by Ogolla (2015), who reported that lack of adequate knowledge and information about pregnancy, laboratory tests results and dangers of late booking or not attending ANC at all, as contributing to poor utilization of PNC services. It was also further argued that the client's level of education influences pregnant women's utilization of health care services especially after birth. Other literature has indicated that women who are poorly educated could easily be persuaded by their grandmothers or TBAs not to attend ANC and to deliver their babies at home (Sialubanje et al, 2015). Therefore, it is logical to conclude in this study that the higher the education levels of mothers, the higher the chances that they will use the ANC/Delivery services.

Furthermore, some survey findings are also in line with the findings that acknowledge that lack of education can negatively affect the women's comprehension of important information and the ability to make informed decisions including the awareness of their own rights

(Ayele, 2014). These findings imply that pregnant adolescent who may have attained only low level education may not value utilizing ANC/Delivery services. High educational levels of both husband and wife have been observed to promote positive health seeking behaviors (Ayele, 2014).

One other consideration that contributes to a pregnant women utilizing or not utilizing maternal health services in the health facilities is the husband/partner's level of education. However, this study did not try to ascertain the educational levels of the respondents' partners/husbands as it is generally known that in Namibia the level of male involvement in reproductive health services is low (MoHSS, 2012). In other settings such as in Ethiopia, Ayele (2014) reported that lack of education of household heads posed a barrier to women's utilization of delivery services at health care institutions.

5.2.2 Maternal Obstetric factors

A number of obstetric factors were examined to understand their influence on the choice of place of delivery by the women. Important considerations among the maternal obstetric factors impacting on a woman's choice of place of delivery include the number of antenatal visits during the pregnancy, the parity of the woman and the obstetric history of the woman regarding previous deliveries.

This study has revealed that the women who attended ANC four or more times were more likely to deliver in health institutions (n=43 (60.6%)) compared with those who attended ANC 3 times or less who were more likely to deliver at home (n=8 (11.3%)). Fourteen of the 71 respondents (19.7%) who delivered at home and only one who delivered in the health facility

never attended ANC services throughout the pregnancy. Namibia implements a focus-oriented ANC protocol that requires women to attend at least four ANC visits during the course of the pregnancy. The finding from this study corresponds with a study done in Uganda, in Nkasi district which reported that all women who had never attended antenatal clinic delivered at home (Gwamaka, 2012). The WHO (2012) recommends that women should commence their ANC visits early during their pregnancies, before 12 weeks' gestation. Namibia 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 first trimester of pregnancy, and encouraging women to deliver their babies at health care facilities (MOHSS, 2014). The MOHSS recommends that the initial visit should take place before 12 weeks gestations or during the first trimester.

Attending ANC provides an opportunity to provide education and screening for HIV and enrollment in PMTCT services, screen and treat anemia, screen for and treat syphilis and other infections that may affect the unborn and newborn baby as well as identify and manage women with obstetric and /or medical conditions. Commencing ANC early during pregnancy allows for the development of interpersonal relationship between the midwife and the pregnant women as well as the development of a delivery plan (WHO, 2013). As the present study has highlighted, non-attendance at ANC services often results in home delivery with the possibility of adverse outcome for the mother and the baby. Socio-demographic and health facility related factors may have important bearings on the decision of the woman to access ANC services, and hence higher chance of delivering in the health facility. The study has highlighted the importance of ensuring pregnant women are supported and encouraged to attend ANC and therefore enhance the likelihood of their giving birth in health facilities.

This study has shown that the parity of the woman did not appear to have any significant relationship to the choice of place of delivery. Those who had 4 or more children did not appear to significantly deliver at the health facility more than those who had 3 or fewer children previously.

The research also sought to determine how health facility related factors might have influenced the decision on choice of place for delivery by the women. Such factors included distance to the nearest health facility, place of previous delivery and availability of skilled attendants. Also the birth outcome for the mother and the baby was also analyzed. The finding from the research has indicated that majority (74.6%) of those who delivered at home lived more than 5 kilometers from the nearest health facility while majority (66%) of those who delivered in the health facilities lived within 5 kilometers of the nearest health facility. Distance from the health facility has a bearing on the cost of transport to the health facility bearing in mind that most of the participants in this study were either unemployed or engaged in menial jobs. Apart from transportation costs, other cost considerations include accommodation near hospital and hospital fees which might have played a role in determining the place of delivery among pregnant mothers, especially in rural areas where health facilities are scattered.

The Intermediate Hospital, Oshakati, is the only state health facility in Oshana region to conduct deliveries, and the only referral hospital for north-central part of the country comprising Oshana, Oshikoto, Ohangwena, Omusati and Kunene regions. Women living closer to health facilities pay less for transport cost and do not have to pay for accommodation and can more readily access delivery services at the health care centers than

those women who live further away from hospital. The time required to reach hospital might also play an important role as the longer the distance from the health facility, the more time it will require for a woman to reach the health facility. This becomes critical when a woman has already started experiencing labour pains at home. Similar findings were reported in Nkasi district, Uganda where it was found that women who lived more than 5 km from health facility were four times less likely to utilize health facility during childbirth compared to those lived within 5 km (Gwamaka, 2012).

The same experience was also found in Kenya, where the women find it impossible to walk for hours or taking the only readily available transport, so they were left with no other option but home birth (Carter, 2010). Contrary to these findings, a study done in Kumasi, Ghana indicated that distance to health facilities is not a contributing factor to low utilization as there are many health facilities available to cater its population (Owuso-Danso, 2007).

In Namibia in 2014, the Programme for Accelerating the Reduction of Maternal and Child Mortality (PARMaCM) under the leadership of former First Lady Madam Penexupifo Pohamba and former Health Minister Dr Richard Nchabi Kamwi, came up with the program of building maternity waiting homes in Namibia. The program had focused at the specific districts like Okongo, Outapi and Engela which are currently in use. However, it seems that Outapi shelter for pregnant women is not yet constructed as it was planned by Social Security Commission to be constructed as for now pregnant women are just using own tents and live rough as they were reportedly seen naked bathing themselves in public (Itamalo, 2016). At the time of this study Opuwo was still under planning, and this is at north-western part of the country. The other districts being considered for this project are Katima Mulilo in the north-

eastern and Gobabis in the East and Keetmanshoop in the south (WHO, 2015). However, no such facility has been constructed in Oshakati district where this study was conducted and the district has its fair share of pregnant women who are living far from the health facility, for example, Uuvudhiya which is about 50 kilometres away from the hospital. The significance of this finding on distance of place of residence and choice of place of delivery is that when women live closer to the health facility they are more likely to make use of the health facility as the preferred place of delivery.

This study has highlighted that six of the women who delivered previously at home went through home delivery again during the last pregnancy. The study has revealed that there was a significant relationship (OR 6.22; p-value=0.07) between place of previous deliveries and place of delivery during last pregnancy. Women who previously delivered at home are therefore more likely to deliver at home than going to deliver at the health facility unless sound intervention to change the status quo has taken place. Delivering at home presents a danger to the newborn baby and the mother as this study has highlighted that more of the women and the babies who had home deliveries experienced more neonatal morbidity and mortality and maternal complications compared to those who had health facility delivery. This finding has pointed out the dangers of home delivery and the need to always seek to promote health facilities as the preferred place of delivery for all pregnant women in order to stem the tide of maternal and neonatal morbidity and mortality.

The study has revealed that most deliveries that occurred at home were attended by non-skilled providers or had no attendants at all at delivery while 87% of deliveries in the health facilities were by skilled attendants and the remainder by semi-skilled attendants. When

women deliver in the health facilities, they are most likely to benefit from skilled attendants at delivery and the incidents of maternal and neonatal morbidity and mortality will be significantly minimized. As already noted, more of the women who reported home delivery also reported that their babies had complications or were dead after birth ($n=10$ (14%)) than those women who had delivered in the health facilities ($n=2$ (2.8%)) under the supervision of skilled attendants. Twenty one percent of the women who experienced home delivery reported having maternal complications after delivery compared with 17% of the mothers who delivered in the health facilities. There was no reported baby death among the women who delivered in the health facilities. Maternal mortality and morbidity is much more common among women who deliver at home with unskilled attendants. The complications cited by the women in this study who delivered at home included anemia due to continuous bleeding, sepsis due to second degree tears, breathing problems, and labour pains lasting many hours. The problems experienced by the babies included difficulty in breathing and death after delivery. In Oshiwambo culture that most of study participants belong to, when a woman delivered at home, the traditional birth attendant usually forces the woman to push once pain commenced, not considering whether it is true or false labour (Namupala & Shigwedha, 2006).

It is known that HIV infection contributes to morbidity and mortality during pregnancy and delivery (Zaba et al, 2013). If a woman did not attend ANC and delivers at home, her HIV status might not have been known. Also unhygienic practices that is likely to happen during home delivery may facilitate HIV transmission from mother to the baby especially during delivery, as the birth attendant may not have knowledge and skills regarding obstetric care on how to deliver HIV positive mothers. Moreover, home delivery circumvents the opportunity of PMTCT program as antiretroviral medications as prophylaxis for the baby are

currently provided at health facilities only. If the mother lives far away from the hospital and cannot reach health facility within 72 hours after delivery, this may negatively affect and impact on initiation of medications. A study done in Malawi indicated also that some people will be ostracized by their community if they are discovered HIV positive and thus continue to live with the disease without treatment and continue to risk the infection of others, including their attendances (Ripple-Africa, 2012). It is not known from the present study if knowledge of HIV status played any role in the decision of the women to choose either health facility or home delivery.

Additionally, a report on Emergency Obstetric Care of Ministry of Health and Social Services in Namibia (2014) found out that women who were supported during pregnancy either by their spouses or relatives had less maternal physical complications during labor and delivery. This practice if generally allowed to be done in the health facilities, will result in improved physical and mental health postpartum and less postpartum depression as similar observations were reported from Kenya (Gjerdingen, Froberg & Fontaine, 2015).

5.3 Summary

This chapter has discussed the findings of the research as presented in the previous chapter. The key findings related to how such factors as demographic and social variables, maternal obstetric factors and factors related to the health facility might have influenced the decision of the women who participated in this study to deliver either in the health facility or at home. The research has highlighted that the younger women were more likely to choose home delivery as against health facility delivery which was more utilized by the older women. Also those who lived within five kilometres from the health facility and had secondary or tertiary

education tended to make use of the health facility more than those who lived more than five kilometres from the health facility and had no formal or primary education. Those who delivered in the health facilities were women who attended ANC services four or more times compared with those who delivered at home who either did not attend ANC or had fewer than the recommended ANC attendance during pregnancy. Neonatal morbidity and mortality was much higher among babies delivered by the women at home than among those who delivered in the health facilities. Similarly maternal morbidity was higher among those who experienced home deliveries. The findings from this research were compared with the reports from similar studies in other parts of the world. The next chapter will summarize the research findings, draw conclusions and make recommendations for improving the use of health facilities by women as the preferred place of delivery.

CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter presents a summary of the findings of the research based on the research objectives. It draws conclusions based on the findings and thereafter makes recommendations for key stakeholders to ensure the main aims and the objectives of the research are realized. The limitations of the study are also presented, highlighting the key strengths and weaknesses of the research.

6.2 Conclusions

This was a cross sectional, retrospective study anchored on the comparative analysis of factors that might have influenced the study participants to decide whether to make use of health facilities for delivery or deliver at home.

The main aim of the research was to explore and describe factors associated with non-utilization of delivery care services among multiparous women attending postpartum care services at Intermediate Oshakati hospital. In order to realize this aim specific objectives were formulated that included selecting and interviewing women attending postnatal clinic in 3 health facilities around Oshakati in order to describe socio- demographic profile of multiparous women attending postpartum care services at Intermediate Referral Hospital, Oshakati, Ou Nick health center and Ongwediva health center and also to determine factors associated with non-utilization of institutional delivery services among these multiparous women. This section of the chapter discusses whether or not the above objectives were answered.

6.2.1 Describe the socio-demographic profile of multiparous women attending post-partum care services at Intermediate Hospital Oshakati, Ou Nick Health Centre and Ongwediva Health centre

The research found that the multiparous women attending the post-partum care services at these facilities are women whose ages ranged from 17-45 years with a mean age of 30.6 years, with the majority (48%) being those aged 20-29 years. Most of these women (61.3%) were single and only about 20% were married and 16% lived in a co-habiting relationship with their partners. Almost all of them are Oshiwambo-speaking and identified themselves as Christians. Majority of them (55%) had secondary education and 18% had no formal education while only 6% had tertiary education. Most of the women are unemployed (58.5%) and only about 6% are in formal employment while the rest are in informal or self-employment. About 92% of these women reside in the town or peri-urban areas and over half of them live more than 5 kilometers from the nearest health facility.

6.2.2 Determine the factors associated with non-utilization of institutional delivery services among these multiparous women

In order to realize this objective the research analyzed the socio-demographic, maternal obstetric and other related factors comparing the women who delivered in the health facilities to those who delivered at home. The finding from the research has revealed women who delivered at home tended to be younger than those who delivered at the health facilities. Those who lived near the health facilities were more likely to deliver at the health facilities than those who lived more than 5 kilometers from the health facility. Also those who were

unemployed and had little or no education tended to deliver at home more than those who had some education and were employed. Thus being educated and employed was significantly associated with institutional delivery. Also having attended ANC services four or more times during the course of the pregnancy was significantly associated with institutional delivery. Those who had delivered at home previously tended to make use of home delivery compared to those who did not have a previous home delivery. No significant relationship was found between parity of the woman and the marital status of the woman and the choice of place of delivery.

6.3 Study Limitations

The study was limited to women attending postnatal care services and only 3 health facilities were included in the study. Only 142 participants were sampled for inclusion in the study.

There are other women who might have delivered either at home or in the other health facilities that were not included in the study. The generalization of the findings from this research may therefore be limited.

Only structured interviews were conducted; however more in depth information might have been obtained by conducting individual in-depth interviews or focus group discussions.

The study design was based on a cross sectional retrospective analytical approach. It is possible that some of the respondents were unable to recall well some information concerning previous pregnancies although the researcher tried to use the health card for the current baby to get some additional information.

In this study, the researcher did not go beyond the individual factors and did not investigate the effects of community and district level factors on utilization of maternal health services.

So in order to have a composite picture of the factors and enhance the utilization of maternal health services in the state, in addition to individual-level, there is a strong need to focus on community and district-level factors which are equally important. The influence of the spouse on the utilization of maternal services by the woman was also not fully explored in this study.

6.4 Recommendations

This was a comparative analytical study that has identified a number of factors which impacted on the decision of the participants in this study to choose either delivery at the health facilities or at home. The overall purpose of this study was to identify such factors in order to make recommendations for interventions to be implemented to encourage more women to make use of health facilities as the preferred place of delivering their babies thereby reduce the problems of maternal and neonatal morbidity and mortality in Namibia.

Based on the research findings the following recommendations are therefore made:

Implement targeted Health Education and Awareness Campaigns

The study revealed that many young mothers delivered at home, so there is a need for an intervention to ensure that all pregnant women deliver in health facilities. Therefore:

- The Ministry of Health and Social Services in Oshana Region through the Family Health Division should ensure that all mothers irrespective of their age are sensitized through church gatherings, youth gatherings and in the media about the importance of utilization of ANC and delivery care services for the country to have healthy population.
- The Ministry of Health and Social Services, through the Family Health Division should liaise with Ministry of Basic Education, Arts and Culture on school health

services and provide health education and counselling to teenage women on the importance of antenatal care, institutional delivery and other reproductive health services.

- Improve general literacy of the population: The government of the Republic of Namibia should through the Ministry of Basic Education, Arts and Culture strengthen the implementation of access to basic education including adult literacy programmes to ensure that the literacy level in the country is improved and thereby facilitate knowledge, understanding and utilization of reproductive health services especially antenatal and institutional delivery services.
- It is important to empower young women educationally and through provision of skills for gainful employment as they form the majority of those who access health facilities and need good maternal and child care services as they become pregnant. This will go a long way to reduce incidents of maternal and neonatal morbidity and mortality in Namibia.

Implement interventions to improve access and utilization to maternal services among multiparous women

- The research has highlighted that many of the women who delivered at home were unemployed and lacked the economic power to access care in health facilities. It is therefore recommended that the government through the Poverty Eradication Ministry, the Ministry of Gender Equality and Child Welfare and the Ministry of Urban and Rural Development implement measures that seek to empower women financially to ensure they are able to access care in health facilities for antenatal and delivery.
- The Ministry of Health and Social Services in Oshana Region should liaise with the local political and community leaders to ensure that more health facilities are

constructed especially in rural areas so as to be easily accessed by expectant mothers for easy utilization of ANC and delivery services in Oshana region.

- The Ministry of Health and Social Services and the Office of the First Lady with the support of WHO and other development partners should construct a maternity waiting home in Oshakati and other towns where such facilities are needed to ensure that women from remote places have a place to stay when the time of delivery becomes near.
- There is a need to empower the health extension workers in the community to identify pregnant women and to encourage pregnant women so that they can start ANC as early as possible or deliver at hospital. The Oshana Regional Directorate of the Ministry of Health and Social Services and the District Health Management Team should ensure the implementation of this recommendation.
- Partner and community involvement: There is a need to strengthen the implementation of Partner Involvement in Reproductive Health Services including antenatal and delivery services. The MOHSS liaise with media, since there are some studies that show that husbands and male partners of women who were exposed to radio campaign are twice more likely to participate in maternal health (Zanawe et al, 2015). Television, newspapers as well as influential people, like local musicians, artists or comedians should be involved to make the community aware the dangers of home deliveries.

The MOHSS can adopt the Malawi policy for community mobilization to increase facility based deliveries. This is done primarily through working with traditional and religious leaders by educating them about safe motherhood. They are involved to educate each other traditional leaders and their community members and they have also taken the initiative to pass local laws formally prohibiting TBA or home deliveries. Locally

appropriate incentives can be provided to women who deliver in the health facilities to act as a spur for others to follow suit.

- The Ministry of Health and Social Services should seek collaboration of community based and civil society organizations and Women's Groups and Activists in the implementation, monitoring and evaluation of maternal and reproductive health services and encourage women to utilize health facilities for delivery of their babies when pregnant. Training and equipping of traditional birth attendants should be pursued and they should be made part of the health system since some women because of cultural issues will still patronize the services of TBAs.

6.5. Recommendations for further research

The present research did not investigate the role of the partners and relatives on the decisions of the women to deliver either in the health facility or at home. It is therefore recommended that a future research should examine these aspects in order to have a holistic view on issues and interventions to be implemented to ensure more women make use of health facilities to deliver their babies.

Also the feasibility and acceptability of using locally appropriate incentives to encourage facility-based delivery should be investigated in a future research.

6.6 Summary

This chapter has presented conclusions, limitations and recommendations emanating from the research. The findings have been summarized as per the research objectives and the

recommendations made for key actors for interventions that would hopefully ensure that more women make use of antenatal and delivery services in the health facilities and thereby reduce the incidences of maternal and neonatal mortality in Namibia. Recommendations on areas for future research have also been made. The main limitations of the research included the retrospective nature of the data and involvement of only those who came to health facilities for post-natal services. The research has provided the researcher an opportunity to make a contribution in this area of reproductive health and shed some light into issues that influence women in making choice in the place of delivery in Oshana region. It is hoped that the Ministry of Health and Social Services and the key partners in health and social services will make use of the information generated in this study to improve maternal and reproductive health services in Oshana region in particular and other similar regions in Namibia.

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Appendices

Appendix 1: Final Questionnaire for Data Collection

Annexure A: QUESTIONNAIRE Cover note/Information Sheet

Dear respondent,

RE: INVESTIGATION OF NON UTILIZATION OF CHILD DELIVERY SERVICES AMONG MULTIPAROUS AND GRAND MULTIPAROUS WOMEN AT OSHAKATI INTERMEDIATE HOSPITAL and NEAR BY HEALTH CENTERS, OSHANA REGION, NAMIBIA.

My name is Helena Hidengwa; I am a Master of Public Health (MPH) student at the University of Namibia. In order to fulfill the requirements for the above mentioned degree I have to submit a full research thesis to the University.

The purpose of the study is to investigate the non-utilization of child delivery services in Oshakati Intermediate Hospital and nearby health centers of the Ministry of Health and Social Services.

The data will help me to understand this practice, and to provide recommendations to the Ministry of Health and Social Services' policies and decision makers. Participation is voluntary; however, you are encouraged to share information as much as possible. All information will be treated confidentially by ensuring anonymity as nowhere on this form your name will be written. However, you are free at any stage to decide to withdraw your consent and participation in the study without prejudice.

Permission to conduct the study has been granted from the University of Namibia and the Ministry of Health and Social services.

In case of queries or doubts please do not hesitate to contact the researcher at contact numbers: 0812624545 or 065 2233019 or email: hidengwah@gmail.com.

Thank you for taking part in this study. Your input will be greatly valued.

Annexure B

Consent Form

You have been selected to participate in a study by Ms. Helena Hidengwa student number 8803730, who is pursuing a study for a Master's degree in Public Health at the University of Namibia.

The title of the study is:

COMPARISON OF FACTORS ASSOCIATED WITH UTILIZATION AND NON-UTILIZATION OF CHILD DELIVERY SERVICES AMONG MULTIPAROUS AND GRAND MULTIPAROUS WOMEN OSHAKATI INTERMEDIATE HOSPITAL AND NEAR BY HEALTH CENTERS, OSHANA REGION.

This study has been described to me in language that I understand and I freely and voluntarily agree to participate. I understand that my identity will not be disclosed and the consent I am going to give will be kept confidential. I may choose to withdraw or not answer specific questions in this study without giving a reason at any time and this will not negatively affect me in any way.

Participant's signature

Date

Interviewer's signature

Date

APPENDIX 1:

This questionnaire deals with the: **INVESTIGATION OF NON UTILIZATION OF CHILD DELIVERY SERVICES AMONG MULTIPARUOS AND GRAND MULTIPARUOS WOMEN AT OSHAKATI INTERMEDIATE HOSPITAL AND NEAR BY HEALTH CENTERS, OSHANA REGION, NAMIBIA.**

Your confidentiality

When completing the questionnaire, your responses are completely anonymous.

Please answer the questions as freely as there is no right or wrong answers. I am interested in your views. All the information you provide will be treated with the strictest confidentiality.

SECTION A1. SOCIO- DEMOGRAPHIC INFORMATION

Serial number	
1. How old are you?	
2. Education (i) No formal education and not able to read and /or write	
(ii) No formal education but able to read and/or write	
(iii) Had received formal education	
If Yes in (Q2 iii) what grade/education did you complete or achieve?	
3. Religion	Christian
	Non- Christian
Other (specify)	
4. Marital status	
Never married	
Married with certificate	
Married traditionally	

Divorced/Separated	
Cohabiting	
Widow	
5. Ethnicity/Language	Oshiwambo speaking Other(Specify)

6.Occupation

None		Clerk		Businesswoman		
Professional/ Technical/ Managerial		Agricultural		Skilled manual		
Unskilled manual		Other(Specify				

7.Place of residence		
7.1.Region		
7.2.Location	7.2.1Village	
	7.2.2Shack dwellers	
	7.2.3Town	

A2. 8. IDENTIFICATION

8.1.Name/Code of H/Facility		8.5.Reason for visiting/staying in H/Facility	
8.2. Hosp.No. of Respondent		8.6.Service/ H/Facility participant visited/stayed in	
8.3.Region H/Facility is located		8.7.Village/Town H/Facility is located	
8.4.Data of collection			

**A3. 9. CONDITIONS RELATED TO LATEST (RECENT) PREGNANCIES/
DELIVERIES OF MULTIPAROUS WOMEN WHO CAME FOR POST NATAL
/CHILD HEALTH CARE.**

9.1. Last (recent) delivery?

9.2 What was the year of the last (recent) delivery?

9.3 What is the birth order of the last (recent) delivery?

9.4 Where did you deliver the last (recent) baby?

**9.5(a) Health facility ☐ 11.(b) On way to health facility ☐ 11. (c) Home ☐ 11. (d) If
other Specify.....**

9.6 If (a) or (b) in Q11, how did you come to the health facility?

12.a)On foot ☐

12. b) By bicycle ☐

12. c) Donkey cart ☐

☐

12.d) Car

12. e) Other (Specify) ☐

9.7 What was the fetal outcome of the last (recent) pregnancy/delivery?

9.8 (a) Abortion 9 (☐ Terminated 9 c) Li☐birth 9 d) Fresh S☐lbirth 9e) ☐

Macerated/Neonatal death ☐

10. Maternal related outcome of the last (recent) delivery

10.9.1 Type of delivery

10.9.2 Number of ANC visits

10.9. 3Attendant of delivery

11. 10 Previous pregnancies/deliveries

11.10.1 How many previous pregnancies excluding the last (recent) did you have?

11.10.2 How many previous deliveries excluding the last (recent) did you have?

11.10.3 Participants previous pregnancies excluding the last (recent) one?

Deliveries	1st	2nd	3^r	4^t	5th	6th	7th	8th	9th
			d	h					
11.10.3.1.Type of delivery									
11.10.3.2 Place of delivery									
11.10.3.3 Maternal Health outcome after delivery									
11.10.3.4 Outcome of baby									
11.10.3.5 No. of ANC visits									
11.10.3.6 Who assisted in the deliveries?									

SECTION.B. FACTORS/REASONS FOR HOME DELIVERIES BY MULTIPAROUS WOMEN WHO CAME FOR POST NATAL/ CHILD HEALTH CARE.

12. Where did the following people want you to deliver your last child?

12.5.1 Partner/ husband

12.5.1(a)At home		12.5.1(c)Had no preference/Did not care	
12.5.1 (b)Health facility		12.5.1(d) I did not know	

12.5.2 Friends/neighbours

12.5.2 (a)At home		12.5.2 (c)Had no preference/Did not care	
12.5.2(b)Health facility		12.5.2 (d) I did not know	

12.5.3 Relatives

12.5.3 (a)At home		12.5.3 (c)Had no preference/Did not care	
12.5.3 (b)Health facility		12.5.3 (d) I did not know	

SECTION D. FACTORS/REASONS FOR HOME DELIVERIES BY MULTIPAROUS WOMEN WHO CAME FOR POST NATAL/ CHILD HEALTH CARE.

13. Where did your partner/ husband want you to deliver your last child?

- (a) At home ☐ (b)Health facility ☐ (c) Had no preference /Did not care ☐
(d) I did not know ☐ (e) It is taboo ☐ (f) Not applicable ☐

14. Where would your friends/neighbours have liked you to deliver your last child?

- (a) At home ☐ (b)Health facility ☐ (c) Had no preference/Did not care ☐
(d) I did not know ☐ (e) It is a taboo ☐ (f)Not applicable ☐

15. Where would your relatives have liked you to deliver your last child?

- At home ☐ (b)Health facility ☐ (c)Had no preference/Did not care ☐
(d) I did not know ☐ (e) It is a taboo ☐ (f)Not applicable ☐

SECTION C. SUGGESTION FOR IMPROVING HEALTH FACILITY DELIVERY SERVICES BY MULTIPAROUS WOMEN WHO CAME FOR POST NATAL/CHILD HEALTH CARE.

16. In your opinion, what type of improvements should take place to convince women and society to deliver in health facilities?

No.	Response	Yes	No
11.a	Maternal services should made available at community level		
11.b	Accommodation, transport, hospital should be free of charge		
11.c	Health workers should be friendly		
11.d	Health workers should be trustworthy		
11.e	Health workers should be supportive		
11.f	Health workers should be non judgmental		
11.g	Bad outcome i.e. deaths, complications towards mother and baby in health facilities should be improved		
11.h	Male should not work at maternity wards		
11.i	Privacy/exposure to others should improve and maintained		
11.j	Delivery positions should be modified other than dorsal position		
11.k	Other(Specify)		

Appendix 2: Letter of Approval from UNAM to conduct the study

UNIVERSITY OF NAMIBIA

Private Bag 13301, 240 Windhoek-Ndondongo Avenue, Windhoek, Namibia



Enquiries: Dr. H. J. Hamukoko
Private Bag 13301
Windhoek
Namibia

Tel: +264 61 203 81 07
Fax: +264 61 203 81 07
E-mail: hamukoko@unam.na

All correspondence must be addressed to the Office of the Associate Dean

LETTER OF PERMISSION- POST GRADUATE STUDENTS

Date: 10 September 2015

Student Name: Ms Helena Ndeengwa
Student number: 8805730

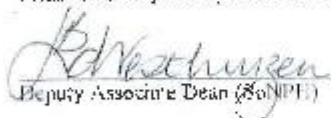
Dear Student:

The post graduate studies committee has approved your research proposal.

INVESTIGATION OF FACTORS ASSOCIATED WITH NON-UTILIZATION OF CHILD DELIVERY SERVICES AMONG MULTIPAROUS AND GRAND MULTIPAROUS WOMEN AT OSHAKATI INTERMEDIATE HOSPITAL AND NEARBY HEALTH CENTRES, OSHANA REGION, NAMIBIA

It may be required that you need to apply for additional permission to utilize your target population. If so, please submit this letter to the relevant organizations involved. It is stressed that you should not proceed with data collection and fieldwork before you have received this letter and got permission from the other institutions to conduct the study. It may also be expected that these organizations may require additional information from you.

Please contact your supervisors on a regular basis.


Deputy Associate Dean (SOPH)

Appendix 3: Letter of Approval from MOHSS to conduct the stud