

**Knowledge and Attitudes of Women Regarding Mother-to-Child
Transmission of HIV Infection in the Ehlanzeni District,
Mpumalanga Province, South Africa**

by

Ednah Virginia Sechabe

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Supervisor: Dr MN Jali

Co-Supervisor: Dr ME Lekhuleni

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DECLARATION

I, Ednah Virginia Sechabe, declare that this dissertation, “Knowledge and Attitudes of Women Regarding Mother-to-Child Transmission of HIV Infection in the Ehlanzeni District, Mpumalanga Province, South Africa” hereby submitted to the University of Limpopo for the degree of Masters of Curationis (MCur) has not previously been tendered by me for a degree at this or any other university or institution, that it is my own work in design and in execution, and that all materials contained herein have been duly acknowledged.

EV Sechabe :

Date Signed :



DEDICATION

This study is dedicated to my children, Lesego, Kamogelo and Tumisang, and my husband, Derrick Masepelo. May the Almighty God shower them with lots of blessings.

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I would like to express my sincere thanks to God the Almighty for giving me the strength, hope and health throughout the study.

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ABSTRACT

HIV/AIDS is one of the major challenges facing South Africa today. Over 5.5 million people are infected with HIV and the majority of these infections are in the reproductive age group. Since the start of the epidemic, over 12.2 million women worldwide have been infected with HIV (WHO, 2000:10). The risk of women contracting HIV is rising globally. HIV seems to be a major cause of infant mortality. It is estimated that approximately 55% of women in South Africa are HIV-positive (National Department of Health, 2007:7). It is, therefore, important that knowledge and attitudes of women regarding mother-to-child transmission (MTCT) of HIV infection are explored to reduce the high infant mortality rate and the incidence of MTCT of HIV infections, and to develop preventive programmes on HIV and AIDS. In view of these considerations, the objectives of this study were to explore and describe the knowledge and attitudes of women with regard to MTCT of HIV infection and to provide guidelines for the prevention of MTCT of HIV infection. The study was conducted in the rural area of the Ehlanzeni District in the Mpumalanga Province, South Africa at Bourke's Luck and Elandsfontein clinics. An explorative, descriptive, qualitative research design that is contextual in nature was used. The population consisted of all pregnant women and those in puerperium between 25-40 years of age. Non-probability purposive sampling was used. Participants were selected according to inclusion criteria. Data were collected using semi-structured interviews. The research findings revealed that some participants had knowledge and understanding regarding MTCT of HIV infection while others lacked knowledge and understanding which could impact on MTCT of HIV infection.

KEY WORDS

HIV/AIDS, mother-to-child transmission (MTCT) of HIV infection, infant mortality, pregnant women, qualitative research, semi-structured interviews, themes and sub-themes, literature control, counselling and testing, antiretroviral treatment (ART).

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DEFINITIONS OF CONCEPTS

Acquired Immune Deficiency Syndrome (AIDS)	AIDS is a collection of diseases that are acquired from HIV once the immune system is no longer able to protect the body from illness. AIDS compromises the immune system of the body to the point where it can no longer function effectively (Department of Health, 2007:5). In this study, AIDS refers to a syndrome of diseases that affect the immune system of women.
Antiretroviral treatment (ART)	ARTs are forms of treatment used to improve the quality of life for people living with HIV and AIDS (WHO, 2009:2). In this study, ART refers to treatment used to improve the quality of life of HIV women and their newborn babies.
Attitudes	Opinions and feelings that one usually have about something (Longman, 2006:82). In this study, attitudes refers to the way a person behaves towards mother-to-child transmission of HIV infection.
Knowledge	Information, skills, and understanding that have been gained through learning or experience (Longman, 2006:845). In this study, knowledge means information and understanding of HIV infection.
Women	Adult female persons (Longman, 2006:1768). In this study women means female persons who are pregnant and those in puerium aged 25-40 years.

LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral treatment
HAART	Highly active antiretroviral therapy
HIV	Human Immune Virus
MTCT	Mother-to-child transmission
PCR	Polymerase chain reaction
PMTCT	Prevention of mother-to-child transmission
SANAC	South African National AIDS Council

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 Introduction and background

Human immunodeficiency virus (HIV) infections and acquired immunodeficiency syndrome (AIDS) have risen to alarming proportions worldwide. HIV/AIDS has claimed millions of lives, inflicting pain and grief, causing fear and uncertainty, and threatening the economy of severely affected nations. According to UNAIDS (2003:10), there were 40 million adults and children living with HIV/AIDS worldwide and 5 million people were newly infected with HIV worldwide. Approximately 10% of the world's population infected with HIV lives in sub-Saharan Africa (Department of Health, 2007:17). According to WHO (2000:10), since the start of the epidemic, over 12.2 million women worldwide have been infected with HIV and women account for 42% of the 30.6 million adults now living with the disease. Because of the particular vulnerability of women, the risk of women contracting HIV is rising worldwide. These figures continue to increase in industrialized and developing countries. In sub-Saharan Africa there are already 6 women with HIV for every 5 men, and close to 80% of women infected, are African (WHO, 2009:35).

HIV/AIDS represents one of the major health and social challenges facing South Africa today. Over 5.5 million people are infected with HIV and the majority of those infections are in the reproductive age group, newborn infants and children under the age of one year (Department of Health, 2004:10). The commonest route of HIV infection for HIV-positive children less than 5 years is through mother-to-child transmission (MTCT), which occurs when an HIV positive woman passes the virus to her baby. MTCT can occur during pregnancy, labour, delivery or breastfeeding. A study done in South Africa revealed that babies who were exclusively breastfed were significantly less likely to become infected with

HIV/AIDS in the first three months compared to babies on mixed feeding (Engender Health, 2007:3). Kanabus & Noble (2008:1) state that without treatment, around 15 - 30% of babies born to HIV-positive women will become infected with HIV during pregnancy, labour and delivery while 5 - 20% of babies will become infected through breastfeeding. Kanabus & Noble (2008:1) is also of the opinion that in the absence of preventive intervention, the probability that an HIV-positive woman's baby will become infected is approximately 25 - 45%. At the end of 1999, it was estimated that there were approximately 4.2 million HIV-positive South Africans, almost half of whom were women in their reproductive years. It is estimated that there are 50,000 HIV-positive children whose HIV transmission was contracted primarily through MTCT.

In 2005, around 700,000 children under 5 years of age became infected with HIV worldwide, mainly through MTCT. About 90% of these MTCT infections occurred in Africa where AIDS is beginning to reverse decades of steady progress in child survival (Kanabus & Noble 2008:1). An estimated 420,000 children were newly infected with HIV in 2007, the vast majority of them through MTCT (Department of Health, 2004:6).

1.2 Problem statement

MTCT of HIV is an overwhelming source of HIV infections in young children and is also the cause of high infant mortality rates. It is approximated that 20% - 30% of women attending prenatal care in South Africa are HIV-positive. In the absence of intense prevention of MTCT, probably 25% -35% of babies born to HIV-positive mothers will be infected. The proper management of pregnant mothers can save a third of the babies during prenatal care, labour and the puerperal care. Mpumalanga, like all the other provinces in South Africa, has the duty to reduce the incidence of MTCT (Department of Health, 2009:3). According to the Department of Health (2008/2009:36) the proportion of antenatal clients tested for HIV in 2005/2006 at the Ehlanzeni District was 260 and nevirapine uptake among HIV-positive pregnant women was 341, while in 2006/2007 the proportion of antenatal clients tested was

403 and the nevirapine uptake among HIV-positive pregnant women was 470. This discrepancy may be ascribed to cross boundary flow of clients that can impact on the coverage. Millennium Development Goal 4 was set to reduce the proportion of infants infected with HIV by 20% by 2005 and by 50% at the end of 2010 (WHO/UNAIDS/UNICEF, 2000:13). The study conducted by Maputle & Jali (2008:48) on pregnant women's knowledge about MTCT of HIV infection through breastfeeding revealed they had inadequate knowledge on MTCT of HIV infection and AIDS through breastfeeding. The study on knowledge of pregnant women on transmission of HIV infection through breastfeeding showed that although women were aware of the susceptibility of children if fed on breast milk and formula feeds simultaneously by HIV-positive mothers, people associated the practice of exclusive feeding with a positive HIV status. Women who had not disclosed their status and were HIV-positive, found it difficult to comply with the requirement to exclusively feed their infants with formula milk. The same women either continued with complementary feeds or did not collect the free formula milk supply, preferring instead to buy the formula feeds privately (Kasinga, Mogotlane, & van Rensburg 2008:21). It is therefore important that knowledge and attitudes of women regarding MTCT of HIV infection be explored to reduce the high infant mortality rate and the incidence of MTCT of HIV infections, in order to develop preventive programmes on MTCT HIV/AIDS at Ehlanzeni District, Mpumalanga Province.

1.3 Aim of the study

The aim of this study was to increase understanding of women's knowledge and attitudes regarding MTCT of HIV infection in the Ehlanzeni District of the Mpumalanga Province, South Africa.

1.4 Objectives of the study

The objectives of the study were to:

- Assess knowledge of women with regard to MTCT of HIV infection.
- Determine attitudes of women regarding MTCT of HIV infection.
- Develop guidelines for the prevention of MTCT of HIV infection.

1.5 Research question

The research question was, “What is the knowledge and attitudes of women regarding mother-to-child transmission of HIV infection in the Ehlanzeni District of the Mpumalanga Province?”

1.6 Significance of the study

It is hoped that this study will assist in the development of programmes that will increase knowledge and enhance behavioural changes of women with regard to MTCT of HIV infections at Ehlanzeni District. Professional nurses in clinics will also benefit from the study as guidelines and recommendations pertaining to MTCT will update their knowledge and skills regarding this phenomenon.

1.7 Research methodology

In this study, an explorative, descriptive, qualitative research design that is contextual was used. The population consisted of all pregnant women and those in puerperium aged 25 – 40 years of age who attended antenatal clinic at Bourke’s Luck and Elandsfontein clinics in the Ehlanzeni District, Mpumalanga Province at the time of data collection. Non probability purposive sampling was used to select the sample. Semi-structured in-depth interviews with a

guide were used. Data were analysed using Tesch's method of open coding as described by Creswell (1998:192) and condensed in Chapter 2 of this study.

1.8 Organization of chapters

- Chapter 1 – Overview of the study
- Chapter 2 – Research Methodology
- Chapter 3 – Results and Discussion
- Chapter 4 – Guidelines for the Prevention of Mother-To-Child Transmission of HIV Infection
- Chapter 5 – Summary, Recommendations, Limitations and Conclusion

1.9 Conclusion

Chapter 1 gave an overview the research study. The problem statement, aim, objectives, research question and the significance of the study were outlined to present the rationale of conducting this scientific investigation. Chapter 2 will discuss the research methodology used in this study.

CHAPTER 2

RESEARCH METHODOLOGY

2.1 Introduction

The purpose of this Chapter 2 is to describe the research design and method that was used to explore and describe the knowledge and attitudes of women regarding mother-to-child transmission of HIV infection in the Ehlanzeni District, Mpumalanga Province.

2.2 Research design and method

In this study, an explorative, qualitative and contextual research design was used to explore and describe the knowledge and attitudes of women regarding MTCT of HIV infection. A qualitative approach focuses on phenomena that occur in natural settings, that is, in the real world and involves studying those phenomena holistically (Leedy & Ormrod, 2005; Smith & Hunt, 1997:206; Burns & Grove, 2005:27). A research design is a plan for scientific enquiry, where a strategy is developed on how the process should be undertaken in addressing a research problem. The underlying principle of a research design is that the researcher must be able to outline what needs to be investigated and explain the way that investigation will be carried out (Babbie & Mouton, 2009:72; deVos, Strydom, Fouche & Delport 2005:82). The goal of a qualitative research inquiry is to understand the meaning of a phenomenon from the perspective of the people experiencing it (de Vos et al, 2002:268). The descriptive part of this study was used to provide the participants with an opportunity to give in-depth descriptions in order to discover new facts about the knowledge and attitudes of women with regard to MTCT of HIV infection (Cormack, 2001:213; Mouton & Marais, 1990:43).

2.2.1 Population and sampling

De Vos et al (2002:199) defines population as the entire group of persons or objects that is of interest to the researcher and meets the criteria which the researcher is interested in studying. A population consists of individuals who encompass the total collection of all units of analysis that the researcher aims to draw specific conclusion from (Welma, Kruger and Mitchell 2008:52). The target population consisted of all pregnant women and those in puerperium at Bourke's Luck and Elandsfontein clinics during the time of data collection. The Mpumalanga Province has 3 districts, namely, Ehlanzeni, Gert Sibande and Ekangala. The study population lived in the Ehlanzeni district. This district has 6 sub-districts, namely, Thabachweu, Bushbuckridge, Mbombela North, Mbombela South, Nkomazi and Umjindi. The study was conducted in the Thabachweu sub-district of the Ehlanzeni district, Mpumalanga Province, where the two clinics are situated.

A non-probability purposive sampling was used in this study. According to Cohen, Manion & Morrison 2007:113) a non-probability sample is used by researchers to target a particular group that does not necessarily represent the wider population, but has the specific characteristics that are of interest to the researcher. Neuman (1997:203) refers to sampling as a subset of the whole population which is actually investigated by the researcher. The sample for the study consisted of pregnant women and those in puerperium at Bourke's Luck and Elandsfontein clinics who met the inclusion criteria. According to Polit, Beck & Hungler (2001:237), a guiding principle for sample size in qualitative studies is determined by data saturation which means sampling of participants was controlled by the point at which no new information is obtained and redundancy is achieved. The sample size for this study was 18 participants from Bourke's Luck clinic and 17 from Elandsfontein clinic. The participants were chosen based on the judgment of the researcher, viz., participants exemplified the characteristics that the researcher predetermined for the study as outlined in the inclusion criteria (de Vos et al, 2005:202).

2.2.2 Inclusion criteria

The following inclusion criteria determined who would participate in the study:

- Pregnant women who are attending antenatal clinic and those in puerperium at Bourke's Luck and Elandsfontein clinics at the time of data collection.
- All pregnant women either at first or follow-up visit.
- All pregnant and those in puerperium aged 25 – 40 years of age.

According to Katz & Marx (2006:38), inclusion criteria refers to eligibility criteria such as age, residence, health status and language. The study was conducted at Bourke's Luck and Elandsfontein clinics. The two clinics were chosen because they provide antenatal and postnatal care services on a daily basis and they are close to each other. The traveling distance of participants from their homes to the clinics is about 0-5 km.

2.3 Data collection method

Data collection method refers to the procedures specifying techniques to be employed, measuring instruments to be utilized and activities to be conducted in implementing a research study (Grinnell 1993:275). Semi-structured in-depth interviews with women from the Bourke's Luck and Elandsfontein clinics were conducted. Open-ended questions were asked during the interview sessions with a guide that enabled participants to speak freely and give detailed descriptions about the phenomenon studied. A tape recorder was used and notes taken during the interviews. Thus, the different methods of data collection used were in-depth interviews, participant's observations, field notes and tape recording. Probing was used to get clarity on issues during the interview sessions. According to de Vos et al (2005:295), probing is a technique used to encourage participants to give more information about the issue under investigation. Data collection continued until saturation was reached. The main aim of preparing the data collection field was to ensure that the venue should be quiet where the

researcher can talk freely with the participants without distractions such as telephone calls and visitors (Watson, Mckenna, Cowman & Keady 2008:284). The interviews were conducted in a private room to ensure privacy. The room was prepared to allow face-to-face contact with the participants. During data collection, the researcher made it a point that own ideas were bracketed before entering the study field to avoid a situation where own ideas can indirectly influence the manner in which the participants respond to the questions during the semi-structured interviews (Mouton & Marais 1990:45). The researcher wrote down her own ideas about the phenomenon studied before starting with the interview sessions.

2.4 Data analysis

Data were analyzed qualitatively through Tesch's open coding method (cited in Creswell, 1998:155). Tesch's method implicates the following steps:

1. The researcher listened to the tape recordings to check the sense of the whole, to internalize the content and then transcribed the contents verbatim. The researcher carefully read through all transcripts to get a sense of entire issue.
2. The researcher picked up one interview randomly, read through it, asked herself the following questions: What is it about? What is the underlying meaning?
3. The researcher listened to the responses to the questions asked.
4. The researcher repeatedly listened and jotted down ideas in the margin as the ideas came to mind.
5. A list of all topics covered were compiled, similar topics were clustered together.
6. The most descriptive wording to topics were identified and used as themes.
7. A final decision about abbreviations for each category was made.
8. The data which belonged to each category were collated and analyzed.

Field notes and voice recordings were used as a point of reference during data analysis. An independent coder was requested to analyze raw data independently. The independent coder is an experienced researcher and supervisor in qualitative data analysis. According to de Vos et al (2002:339), data analysis is a process of bringing order, structure and meaning to the mass of data collected.

2.5 Measures to ensure trustworthiness

Trustworthiness was maintained by using Lincoln & Guba's model as cited in de Vos (2006:346) and Babbie & Mouton (2001:276). Criteria for trustworthiness are credibility, transferability, confirmability and dependability.

2.5.1 Credibility

According to Bowen (2005:215), credibility refers to the confidence one can have in the truth of the findings of the study which can be established through complying with the different methods, for an example prolonged engagement. In this study credibility was ensured by extended engagement through conducting semi-structured interviews, where the participants were allowed to describe their knowledge and attitudes regarding MTCT of HIV infection until data saturation was reached. An independent coder was used to verify the credibility of the study.

2.5.2 Transferability

Transferability refers to the extent to which the findings of a study can be transferred to another context or with other participants. In this study transferability was ensured by means of thick description research methodology. Furthermore, the researcher collected sufficiently detailed data in the natural setting of the participants. In this study, a purposive sampling method was used, i.e., women within the context of phenomenon as experienced in the Bourke's Luck and Elandsfontein clinics in Mpumalanga Province.

2.5.3 Confirmability

In this study, confirmability was ensured by the involvement of the independent coder (de Vos, 1998:351; Babbie & Mouton, 2001:278). Written field notes and the use of a tape recorder supported the semi-structured interviews as a point of reference (de Vos et al, 2006:346).

2.5.4 Dependability

The concept of dependability refers to the consistency of research findings in a qualitative study. Dependability refers to the stability of the findings over time and confirmability to the internal coherence of the data in relation to the findings, interpretations and recommendations (Bowen 2005:216). Dependability in this study was ensured by a thick description of the research methods which was provided in this chapter to bolster the possibility of another researcher repeating the study. Research proposal was presented during a research seminar in the Department of Nursing Sciences, University of Limpopo - Turfloop Campus in October 2009. The independent coder was given the raw data to come up with codes independently and an agreement was reached with the researcher for final codes. Indirectly, the measures of credibility were ensured by dependability (Babbie & Mouton, 2001:278).

2.6 Ethical considerations

The following ethical standards for nurse researchers as outlined in the position statement of the Democratic Nursing Organisation of South Africa (1998:23) were adhered to throughout the research project:

2.6.1 Community entry

Approval to conduct the study was obtained from the University of Limpopo Ethics Committee and the Provincial Department of Health and Social Welfare Research Committee,

Limpopo Province. Permission to access the clinics was obtained from the Mpumalanga Province Department of Health Research Committee. Permission was also granted by the clinic managers.

2.6.2 Informed consent and the right to self determination

Informed consent was obtained from participants before they could participate in the study. The purpose of the study was explained to them before commencing with the semi-structured interviews. Participants were informed about the procedure to be followed and the nature of participation expected during the interview session. The participants were informed that participation to the study was voluntary and they could withdraw from the study at any time. The participants were made aware that they would not be forced to answer any question if they feel that it would violate their rights and confidentiality. The researcher established ongoing rapport with the participants in order to gain trust. The participants were informed that field notes would be written during the interview sessions. Permission was also obtained from participants to use a tape recorder during the semi-structured interviews.

Prior to data collection, the researcher had already received the clearance letter from the Limpopo Department of Health and Social Development Research Ethics Committee and University of Limpopo School of Health Sciences Senior Degrees Committee. According to Soothill, Henry, & Kendrick (1996:184), an informed consent is an agreement that is obtained from participants after they had been adequately instructed about the risks and benefits involved in the research project.

2.6.3 Confidentiality and anonymity

Confidentiality and anonymity were ensured by using codes instead of the names of participants. The researcher protected the identity, privacy and dignity of the participants by ensuring that no connection between the participants and the research data could be made,

thus, codes were used instead of the names of participants (Seale, Gobo, Gaubrium & Silverman 2004: 233; Cormack 2001:57).

2.7 Conclusion

Chapter 2 described the qualitative, phenomenological, descriptive, explorative, and contextual research design that was used in this study in order to explore and describe the knowledge and attitudes of women regarding MTCT of HIV infection. Non-probability purposive sampling was used to include participants of the study. Semi-structured in-depth interviews were held to collect data. Tesch's open coding data analysis method was used (cited in Creswell 1998:155). Trustworthiness criteria considered for this study, i.e., credibility, transferability, confirmability and dependability were described. Ethical standards for nurse researchers as outlined in the position statement of the Democratic Nursing Organisation of South Africa (1998:23) were adhered to in this study.

CHAPTER 3

RESULTS AND DISCUSSION

3.1 Introduction

This chapter focuses on the presentation of data from the in-depth interviews with the pregnant women and those in puerperium attending antenatal and postnatal services at Bourkes Luck and Elandsfontein clinics. The research findings are presented with a literature support from relevant sources and previous research studies in order to engender meaning.

3.2 Description of findings

A total number of 35 participants (n=35) were interviewed, 18 from Bourkes Luck clinic and 17 from Elandsfontein clinic in the Ehlanzeni District, Mpumalanga Province. Table 1 and Figures 1 to 4, summarize the demographic data of participants interviewed at these clinics.

Table 1. Biographical data of participants interviewed at Bourke's Luck and Elandsfontein clinics

Demographic	Variable	N
Educational level	Never went to school	2
	Primary school	4
	High school	25
	College	3
	Technical college/university	1
Religion	Anglican	0
	Lutheran	0
	Methodist	4
	ZCC	15

	Apostolic	4
	Other	12
Parity		
	0-3	23
	4-7	7
	8	5
Gravida		
	0-3	23
	4-7	9
	8	3

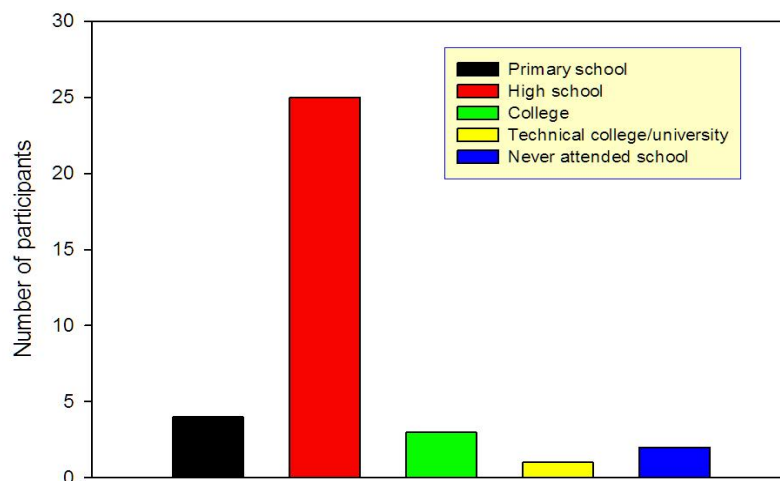


Figure 1. Educational level of participants

The biographical data of participants interviewed at Bourke`s Luck clinic and Elandsfontein clinic according to their educational level were as follows: four attended school until at primary level (black=4), twenty five had a high school education (red=25), three attended school until at college level (green=3), one a qualification from a technical college/university (yellow =1) and two participants never attended school (blue=2).

The educational background of the participants corresponded with the study findings because in sub-theme 1.1 it has emerged that participants of this study lacked knowledge and understanding about MTCT of HIV infection. Kasinga; Mogotlane & van Rensburg (2008:24) stated that a low educational level between grades 6 and 8 scored lower on the knowledge of the mode of HIV transmission from mother to child in general, including through breastfeeding, when compared to those with a tertiary education. They further indicated that women with a higher educational level can understand the increased risk of HIV infection through breastfeeding better than those with lower educational grades (Kasinga et al, 2008:24).

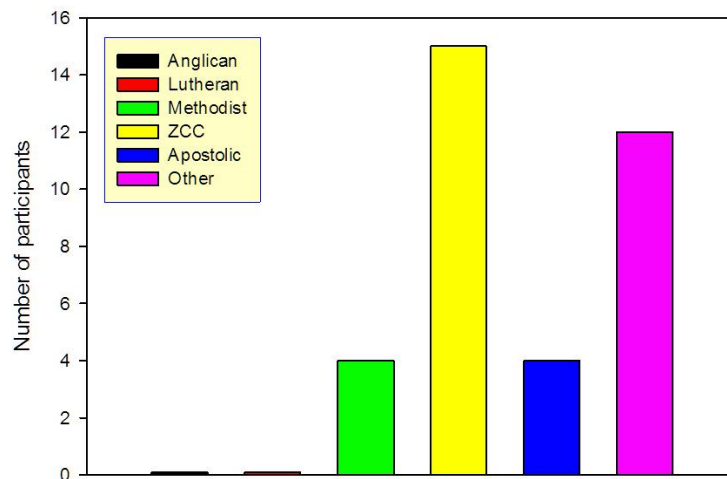


Figure 2. Religion of participants

The religious affiliations of participants interviewed at Bourke’s Luck clinic and Elandsfontein clinic were: Anglican (black=0), Lutheran (red=0), Methodist (green=4), ZCC (yellow=15), Apostolic (blue=4) and other churches (purple=12).

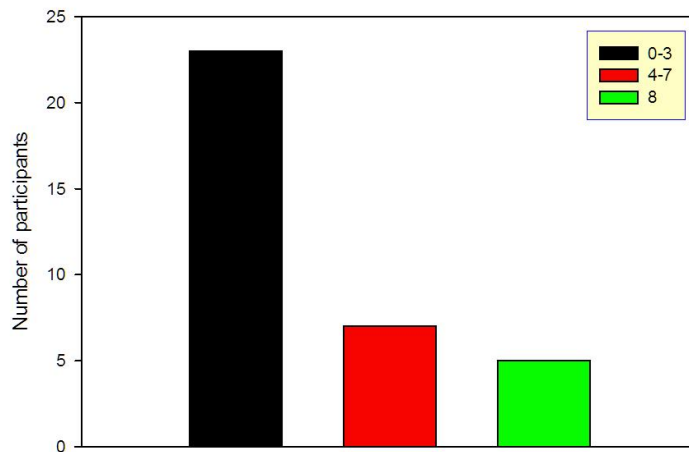


Figure 3. Parity of participants

The biographical data of participants interviewed with regard to their parity were as follows: para 0-3 (black=23), para 4-7 (red=7) and para 8 (green=5).

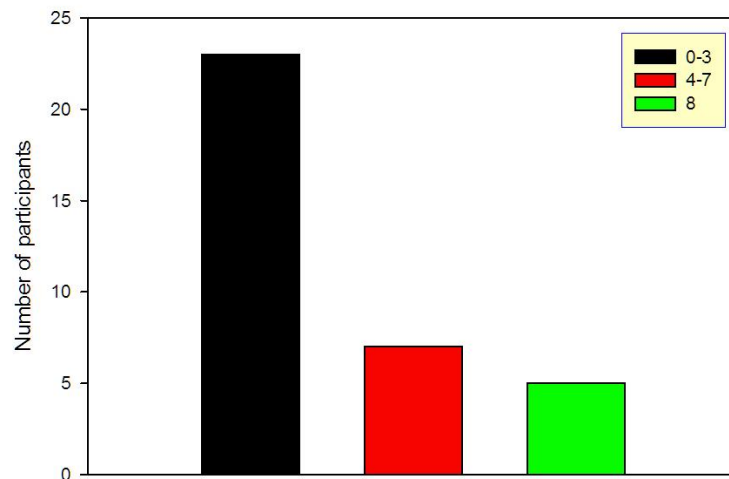


Figure 4. Gravida of participants

The number of participants interviewed according to gravida from Bourke`s Luck and Elandsfontein clinics were recorded as gravida 0-3 (black=23), gravida 4-7 (red=9) and gravida 8 (green=3).

3.3 Discussion of the central storyline reflecting the knowledge and attitudes of women regarding mother-to-child transmission of HIV infection

The study revealed that although the participants included in the study had different opinions and knowledge of MTCT of HIV infection, they had also different attitudes with regard to the prevention of MTCT of HIV infection. The shared knowledge was related to a lack of understanding of the meaning of MTCT and its importance. On the one hand, existing knowledge about prevention of MTCT was reflected by a participant by outlining that it is when the mother is saving the baby from being infected with HIV, "*Mother can save the baby from being infected*". The majority of the participants misunderstood the meaning of MTCT, for an example one participant responded, "*MTCT is when the mother does not care about the baby that is why she transmit the virus to the baby*". On the other hand, the majority of the participants shared an understanding of MTCT as the process when the mother is transmitting the HIV virus to the infant through different modes of transmission, for an example "*Mother can transmit the virus to the baby during pregnancy, delivery and through breastfeeding*". The participants reflected positive attitudes towards preventing MTCT. The participants explained that it is important that women receive HIV counselling because it will assist them to know their own HIV status and, if women agree to test, this will enable them to take precautions not to infect their unborn babies. Additional guidance should also be provided to women to seek medical help if found to be HIV-positive by healthcare providers.

3.4 Discussions of themes and sub-themes and literature control

The following themes and sub-themes emerged from the data analysis (Table 2).

Table 2. Themes and sub-themes that emerged from the data analysis

Themes	Sub-Themes
1. Knowledge and understanding about MTCT of HIV infection	1.1 Lack of knowledge about MTCT of HIV infection
	1.2 Lack of understanding about MTCT of HIV infection
	1.3 Possession of knowledge about MTCT of HIV infection
2. Attitudes towards MTCT of HIV infection	2.1 Positive attitude towards the use of MTCT of HIV infection
	2.2 Risky behaviour decision making enhancement
3. The importance of counselling and testing	3.1 Knowledge of HIV status
4. Prevention of MTCT of HIV infection	4.1 Importance of prevention of MTCT of HIV infection
	4.2 The role of ARVs during pregnancy and puerperium

3.4.1 Theme 1: Knowledge and understanding of MTCT of HIV infection

Theme 1 has three associated sub-themes that have emerged, that is lack of knowledge about MTCT of HIV infection, lack of understanding about MTCT of HIV infection, and possession of knowledge about MTCT of HIV infection.

3.4.1.1 Sub-Theme 1.1: Lack of knowledge about MTCT of HIV infection

The findings of this study showed that participants lacked information about MTCT of HIV infection as supported, for an example by the following response of a participant at Bourke`s

Luck clinic: *“I am not sure and mix feed breast milk and formula milk the baby [can cause MTCT]”*. Another participant, when responding to the follow-up question about her understanding with regard to MTCT said: *“I don’t know”*. Reflection of lack of knowledge was indicated through doubts expressed by another participant: *“I do not know, but I have heard that the mother infects the child. I guess it is through blood from the mother during pregnancy, but I am not sure”*. Other participants at Elandsfontein and Bourke’s Luck clinics who reflected knowledge about MTCT of HIV infection indicated, for an example *“It can be transmitted to the baby through unprotected sex, breastfeeding while HIV positive and you find that there is no milk at the clinic and the HIV positive mothers start to mix feed the baby with breast milk and formula milk”*.

A study conducted by Kumar & St John (2003:1) on the knowledge, attitudes, and sexual practice among the HIV-infected women with repeated childbirths in Barbados revealed that a significant number of mothers did not know that they could transmit HIV to their babies, and further thought that AZT given to them and their babies was to prevent HIV infection in the babies. Sandgren et al (2007:7) also stated that pregnant women in Semey had a poorer knowledge than women in Hong Kong about the specifics of MTCT of HIV infection and further indicated that they reflected lack of knowledge with regard to the means of reducing MTCT of HIV infection. Maputle and Jali (2008:1) in their study conducted at a particular clinic in the Polokwane municipality also found that women have knowledge about MTCT of HIV/AIDS infection through breastfeeding. Abiodun et al (2007:758) in a study conducted in Nigeria on the awareness and knowledge about MTCT of HIV among pregnant women also revealed that the level of knowledge about MTCT is inadequate and hence there is a need for adequate counselling and education about HIV/AIDS and MTCT.

3.4.1.2 Sub-Theme 1.2: Lack of understanding about MTCT of HIV infection

The study revealed that participants at Bourke’s Luck clinic lacked understanding about MTCT of HIV infection, for an example as evidenced by the response: *“I understand mother*

to child transmission of HIV infection as prevention of a virus by the doctor from the mother to child while woman is still pregnant". Participants at Elandsfontein clinic expressed their understanding of MTCT of HIV, for an example *"It is when the mother does not use condoms then the mother will have HIV"* *"During delivery period the blood can possibly spread to the child and the child contract HIV"*. Sandgren et al (2007:5) in their study on HIV and AIDS awareness and risk behaviour among pregnant observed that women had difficulties in distinguishing HIV from AIDS and only 16% could mention symptoms of HIV/AIDS. They also found that women's knowledge in general was superficial with less understanding of the details and the nature of the disease.

3.4.1.3 Sub-Theme 1.3: Possession of knowledge about MTCT of HIV infection

The study storyline reflected that some participants shared different opinions and views about MTCT of HIV infection. Participants at Bourkes Luck clinic who had some knowledge about MTCT of HIV infection responded as follows:

"It is when the mother infects the child with HIV virus during ante-natal care. These happen when both parties did not attend ante-natal classes that assist and counsel them on HIV before planning for a child"

"During pregnancy or after birth or when she is breastfeeding the mother can transmit the HIV to the child."

"Yes because she must know her status to prevent it for her and the baby not to pass the virus from the mother to her baby during natural childbirth."

By comparison, participants from Elandsfontein clinic responded:

"Mother can infect the child with HIV virus during labour or when giving birth, if the ante natal patient did not test for HIV before or the ante-natal patient refused to test"

“It is the process of transmitting HIV from the mother to the child. This can happen during labour pains when giving birth when the child swallows the mother’s blood in the birth canal”.

“The mother when she is HIV positive can infect the baby during pregnancy, labour and breastfeeding”

“The mother and the unborn baby share everything through blood circulation. Through breast feeding after delivery. Not using a condom even if the mother knows her HIV status. Early rupture of water. Lastly during normal birth canal where the baby is exposed to fluids and blood.”

A short survey by (Zolfo, Delvaux, & Tamburrini 2005:3) assessed the level of HIV/AIDS knowledge amongst pregnant women and the acceptability of a PMTCT programme in rural Zimbabwe and showed that although there was a good level of HIV/AIDS knowledge among pregnant women, a demand still existed for a more comprehensive PMTCT programme. Addo (2005:52) in the study on pregnant women’s knowledge of and attitudes to HIV testing revealed that women attending the antenatal clinic in Komfo Anokye Teaching Hospital recognized HIV/AIDS as a life-threatening condition and they were aware of the main symptoms and signs. They also knew the main modes of transmission.

According to Tan et al (2007:250), women in China who participated in their study displayed a good to excellent knowledge about most items pertaining to HIV and AIDS. Furthermore, there was a high level of knowledge of HIV and AIDS infection and most women were also aware that HIV was transmitted by drug users sharing needles, receiving blood from an infected person and from mother-to-child. The findings of this research study support the observations of Oyieke & Gotink (2002:1) that only 16% of the women were aware that medicine from the hospital could prevent MTCT of HIV, compared to 34% at follow-up, whilst 20% of the women at baseline and 58% at follow-up had the same knowledge. Additionally, the women also demonstrated improved knowledge of the strategies of

preventing breast milk transmission of HIV infection.

3.4.2 Theme 2: Attitudes towards MTCT of HIV infection

The study revealed that the participants displayed different attitudes towards MTCT of HIV infection.

3.4.2.1 Sub-Theme 2.1: Positive attitude towards MTCT of HIV infection

Participants at Bourke's Luck clinic articulated positive attitudes towards MTCT of HIV infection:

"Yes it is important to be counseled because I will be able to know my status because when I know my status I will be able to know how I should take care of myself"

"Yes, because I must know my status to prevent HIV transmission for me and my baby not to pass the virus from the mother to her baby in natural childbirth".

According to the study conducted by Sandgren et al (2007:8) on the attitudes of women towards PMTCT, 7% indicated that they would want to have more children, even if they were found to be HIV-positive, whilst 83% were prepared not to breastfeed their babies in such a reality and were prepared to take prescribed medication. The work by Sandgren et al (2007:8) lend credence to the findings of this study, i.e., that pregnant women were aware of the three main routes of transmitting HIV infection, i.e., sexual intercourse without a condom, sharing needles while injecting drugs and mother-to-child transmission. According to Tan et al (2007:250) the following were the attitudes toward HIV carriers and AIDS patients:

- Willingness to live with people having HIV and AIDS in the same community
- Reluctant to live with people with HIV and AIDS in the same community
- Dislike having contact with HIV and AIDS people

- Feel empathetic towards people living with HIV and AIDS
- Contact with people living with HIV and AIDS as before
- Discriminate against people living with HIV and AIDS

Contrary to the findings of this study, Kumar & St John (2003:1), in their study conducted on the knowledge, attitudes, and sexual practice among the HIV-infected women with repeated childbirths in Barbados revealed that most mothers reacted negatively or were not sure whether counselling sessions would help them. Additionally, denial and a high degree of fear were reflected in their interview responses which had an adverse effect on their attitudes.

3.4.2.2 Sub-Theme 2.2: Risky behaviour decision making enhancement

This research study confirmed that pregnant women who display risky behaviours were at increased risk of transmitting the HIV infection to their unborn babies. The study findings also revealed that there is a great need for individuals in society and communities to be aware of their risky behaviours through awareness campaigns and health promotion strategies. Participants at Bourke's Luck clinic confirmed risky behaviours of women which could lead to an increase in MTCT of HIV as follows:

“If the mother does have more sexual partners then the mother has the possibility of having the HIV virus and that can be transmitted to the baby”

“If you do not use condom always when you have sex”

“Yes if you know your HIV status you can plan for your future”

“If the mother does not know her own status, then you can transmit because if you know your status you will seek medical help and they will give you treatment to drink and you will not infect your unborn child”

A participants from Elandsfontein clinic responded:

“The mother and the baby share blood whilst the infant is still in the uterus, and also during birth if there is early breaking of the water the baby will be exposed to the virus and get it [thus this should be avoided].”

Stringer & Sinkala (2004:1) in their study conducted in Zambia on the knowledge and risky behaviour of women revealed that their knowledge of HIV did not correlate with actual HIV status and the risk perception did not link up with behaviour. They also found that women who had greater HIV-related knowledge had riskier behaviours. A study by Addo (2005:52) on pregnant women’s knowledge of and attitudes to HIV testing concluded that it was evident that most women tested for HIV because it was a prerequisite for church blessing of their marriages. The following factors contribute to the behaviour decision making enhancement process (Department of Health 2008/2009:42):

- Preventive measures during pregnancy, birth and breastfeeding
- Practicing safer sex
- Treatment decision making
- Prevention versus cure
- Adaptation of positive lifestyle

3.4.3 Theme 3: The importance of counselling and testing

The study findings related to this theme suggest that the participants had different knowledge and understanding with regard to the importance of counselling and testing as reflected in the sub-themes.

3.4.3.1 Sub-Theme 3.1: Knowledge of HIV status

The majority of the participants recognized the importance of HIV counselling and testing whilst others did not know its significance. Participants at Bourke's Luck clinic indicated their knowledge about the importance of HIV counselling and testing as follows:

"It is important to be counseled for the sake of the baby"

"It is important because you must know your status, if you tested and find that you are HIV then can give you counselling and pills to prevent that"

"Yes because there are so many boyfriends who you can trust. But the problem is when they are drunk they sleep with many girlfriends. It is important to test HIV to save the child."

Participants at Elandsfontein clinic responded:

"Yes! Yes! It is necessary because counselling will assist in preventing the infection from multiplying to those with many sexual partners like many girlfriends and boyfriends"

"It is possible for a mother to transmit the virus to her unborn baby but it is however true that this can be prevented if the mother can be responsible enough to get tested and take the necessary precautions (treatment from the clinic/hospital)"

"Yes because she must know her status so that the baby can be safe".

Iliyasu et al (2006:1917), in their study on the knowledge of HIV and AIDS and attitudes towards COUNSELLING AND TESTING strengthen the findings of this study as they indicated that the majority of respondents were willing to be tested and would recommend it to friends and relatives, whereas the remainder said they would only consent to the test if a cure were available.

3.4.4 Theme 4: Prevention of MTCT of HIV infection

This research study found that the participants had knowledge about the importance of prevention of MTCT of HIV infection. Two sub-themes were identified, i.e., the importance of prevention of MTCT of HIV infection and the role of ARVs during pregnancy and puerperium.

3.4.4.1 Sub-Theme 4.1: Importance of prevention of MTCT of HIV infection

The study revealed that some of the participants had knowledge of the importance of PMTCT of HIV infection. The participants were aware that PMTCT of HIV is a powerful weapon to fight against the spread of HIV. The following quotations confirmed that the participants had knowledge of the importance of PMTCT, for an example a participants from Bourke`s Luck clinic responded: *“It is important because if the mother can be sick and die due to the HIV virus, the child can remain living being an orphan”*, whereas a participant from Elandsfontein clinic indicated: *“Yes! Because we want to know whether the mother is positive or negative, so that when the mother is positive and then we can protect the baby to the HIV positive status”*.

A study that assessed HIV/AIDS knowledge, attitudes and behaviours of Chinese students showed that students’ knowledge in the area of prevention was moderate. More than 80% of the students responded to the majority of questions, but unexpectedly, only 20,6% knew the ABC (abstinence, being faithful and condom use) method for preventing HIV. Moreover, only 10.9% correctly chose all the prevention methods (Tan et al, 2007:250).

3.4.4.2 Sub-Theme 4.2: The role of ARVs during pregnancy and puerperium

The study revealed that participants were aware that the implementation of ARVs plays a significant role as a strategy utilized to prevent HIV transmission to unborn babies. Early initiation of ARVs during pregnancy, for an example as soon as 14 weeks of pregnancy,

substantially reduces the spread of HIV infection. One participant from Bourke's Luck clinic responded, *"The mother should take treatment meaning the ARV's during pregnancy until birth of the child. And the child will be given treatment for preventing the virus until seven days, Because it is necessary to test if you are HIV positive you will get the treatment until you give birth, after they give the baby treatment, and formula so as they will do the PCR test on the baby at 6 weeks. At that time the results will be negative, so that the baby is not infected"*, whereas another further explained the role of ARVs and the importance of counselling and testing which include PCR test on the baby at 6 weeks, *"The mother should be given treatment when in labour and the baby after birth to prevent the virus getting into the baby."*

Participants at Elandsfontein clinic when asked about the importance of counselling and testing said:

"The mother must be counseled and be tested so that if she is HIV positive she can be given treatment of HIV to avoid spreading it to the baby' "

"It is important for the mother to be counseled so that the baby can be treated for HIV if the mother is positive."

According to Damania & Tank (2006:390), antiretrovirals reduce MTCT by reducing maternal viral load and thereby decreasing viral exposure to the foetus. In situations where resources are not constrained, highly active antiretroviral therapy (HAART) is recommended for pregnant women with CD4 counts lower than 200 to 350 ml or HIV-1-RNA copy numbers exceeding 1000/ml. Duran, Ivalo, Hakim, Masciottra, Zlatkes, Adissi, Neaton & Losso (2006:24) conducted a study on the impact of strategies to reduce HIV-1 vertical transmission on a cohort of pregnant women and concluded that an ART was the most significant factor associated with the transmission rate. HIV transmission odds were 0.04 for any ART versus no therapy. No cases of HIV transmission were observed among women given combination ART. According to Damania & Tank (2006:392), the AIDS Clinical Trial Group

categorically demonstrated the usefulness of ART in preventing vertical transmission. The drug was administered antenatally after 14 weeks of gestation and continued throughout pregnancy. In labour, it was administered intravenously and a syrup formulation was given to neonates for 6 weeks. Perinatal transmission was 68% lower in a non-breastfed population.

3.5 Conclusion

It is clear from the findings of this study that some participants shared different opinions in terms of their knowledge regarding MTCT of HIV infection while others have different attitudes about the same. The knowledge shared was related to lack of understanding of the meaning of MTCT and its importance. Furthermore, some participants reflected a positive attitude towards preventing MTCT. The participants indicated that it is important for women to be counselled on HIV testing as this will assist them in knowing their HIV status so that they can take precautions not to infect their unborn infants, and counselling will influence them to seek medical help if they are found to be HIV-positive. The themes and sub-themes which emerged from the data analysis were presented and discussed from the perspective of a literature control.

CHAPTER 4

GUIDELINES FOR THE PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV INFECTION

4.1 Introduction

In Chapter 3, the themes that emerged from the data analysis were interpreted and discussed in relation to literature reports. The findings reflected in the themes and sub-themes that have emerged from the data analysis exhibited the knowledge and attitudes of women regarding MTCT of HIV infection at the Bourke's Luck and Elandsfontein clinics in the Ehlanzeni District of Mpumalanga Province. The themes and sub-themes were discussed individually and it became apparent that participants had different opinions regarding knowledge of MTCT of HIV infection and different attitudes about the same. Chapter 4 presents discussions of the guidelines to support the themes and sub-themes which have emerged from the data analysis. The guidelines presented in this chapter are further supported by relevant literature sources to generate meaning based on existing trends in this field of study.

4.2 Knowledge and understanding about MTCT of HIV infection

4.2.1 Guidelines for lack of knowledge and understanding of MTCT of HIV infection

Midwives who are counsellors in the PMTCT programme should emphasize the importance of MTCT of HIV infection during counselling to empower pregnant women and those in puerperium with information to close the gap in knowledge of MTCT of HIV infection (Petrie et al, 2007:7). MTCT of HIV infection education should be intensified for all women who attend antenatal care (Chama et al, 2010:11). Health education campaigns should include the use of media (for an example, radio, newspapers, television), and community-based events

(for an example, teachings at religious gatherings, sports occasions) and, importantly, health worker participation and capacity building. Partners of pregnant women and of those in puerperium should be involved when giving health education regarding MTCT of HIV infection, as this would facilitate cooperative prevention of infection.

4.2.2 Possession of knowledge about MTCT of HIV infection

Chama et al, (2010:11) states that pregnant women and those in puerperium who are acquainted with MTCT of HIV infection should be afforded the opportunity to enhance their knowledge and impart this to other women. They should also be encouraged to consult healthcare practitioners if they need more clarity on the subject and to update themselves on issues related to MTCT. Recent national efforts to raise awareness on HIV/AIDS among pregnant women and those in puerperium should be intensified. Government should focus on ensuring adequate knowledge among healthcare workers, local government leaders and people living with HIV (Tan et al, 2007:253).

4.2.3 Different attitudes towards MTCT of HIV infection

The data portrayed that pregnant women and those in puerperium who were attending antenatal care at Bourke's Luck and Elandsfontein clinics had different attitudes towards MTCT of HIV infection. It is suggested that quality health education programmes on MTCT of HIV counselling be provided to eradicate any negative attitude and enhance positive attitudes towards the programme of MTCT (Ukpe et al, 2009:339; Maputle & Jali, 2008:45).

4.2.4 Behaviour decision making enhancement

Counselling and HIV education should address not only the perinatal transmission, but also the socio-cultural and behavioural contexts in which pregnancy decision making takes place (Selwyn et al, 1998:3567). HIV prevention campaigns should also focus on developing and maintaining safe sexual behaviour which include abstinence, being faithful to your partner

and the correct use of a condom. The HIV and AIDS education on PMTCT should reinforce the avoidance of risky behaviours that will predispose individuals to HIV infection. Such education would further assist in the elimination of misconceptions related to the transmission of the virus. PMTCT education should further emphasize aspects that will dispel myths and the stigma attached to certain behaviours leading to HIV infection (Qian et al, 2007:1286).

4.2.5 Knowledge of HIV status and the importance of counselling and testing

Rapid HIV testing as a screening and diagnostic tool is one of the key interventions in the national response to HIV and AIDS (Department of Health, 2010:5). Knowledge of HIV status empowers affected individuals to plan and make important life decisions about their care and support. It further reduces the risk of transmitting the virus to babies during labour, delivery and breastfeeding. HIV counseling and testing are important for the success of the MTCT of HIV infection programmes. Counselling and testing campaigns for everyone to be tested for HIV should be enhanced so that even male partners of pregnant women and women in puerperium can acquire knowledge of their status (Stringer et al, 2004:65). Selwyn et al (1989:3568) emphasized the importance of counselling for HIV infected women and the choice of family planning. Counseling and testing should be encouraged to all pregnant women and those in puerperium during their first visit to the healthcare centre. Education on MTCT should be consolidated to include the benefits of counseling and testing and ART. Better quality PMTCT of HIV counselling is needed to further increase the adherence to exclusive infant feeding practices and to improve the uptake of post-delivery follow-up care (Ukpe et al, 2009:338).

4.2.6 Prevention and the importance of MTCT of HIV infection

Since awareness is key to the prevention of HIV/AIDS, there is an urgent need to increase the knowledge and understanding of HIV/AIDS, using all methods of mass media and intensive information dissemination strategies of education (for an example school, church and community activities, folk media, etc.) (Negi, Khandpal, Kumar & Kukreti 2006:138). Women should be given the right information that will help them to make informed decisions about their reproductive lives, particularly on issues of safer sex, nutrition, support networks, alternative or experimental therapies, termination of pregnancy and medical interventions to reduce MTCT. It is suggested that midwives should avoid prolonged rupture of membranes and Caesarean section delivery can be a recommendation to reduce transmission risk. Invasive diagnostic procedures before birth should be avoided, as should any procedure during birth that breaks the baby's skin or increases contact with the mother's blood. Vitamin A plays a major role in modulating the immune response and mucosal tissue protection, both of which are vital throughout any term of pregnancy. According to the Department of Health & SANAC (2010:11) the Prevention Strategy Package for HIV/AIDS transmission includes:

- Information, education, mass mobilization
- Sexually transmitted infection (STI) detection and management
- Knowing your HIV-status, voluntary testing and counselling
- Widespread provision of condoms (male and female)
- Prevention of mother-to-child HIV transmission (PMTCT)
- Safe blood transfusion
- Post exposure prophylaxis
- Life skills education
- Medical male circumcision.

4.2.7 The role of ARVs during pregnancy and puerperium

Early initiation of ARVs as soon as 14 weeks of pregnancy reduces the spread of infection of HIV (Department of Health, 2010:10). ARVs can effect dramatic improvement in health and prognosis of people with HIV (Democratic Nursing Organisation of South Africa, 2010:25). Provision of ART to the mother should be enhanced in order to prevent HIV infection during pregnancy, labour and to the baby after birth. According to South African National AIDS Council (2010:6), all pregnant HIV-positive women with a CD4 count of 350 or with symptoms regardless of CD4 count should be given treatment to prevent MTCT.

4.3 Conclusion

The guidelines and strategies to enhance MTCT of HIV programme were outlined in this chapter. These guidelines could form part of the planning and strategy development process towards successful implementation of PMTCT of HIV programme that will also empower pregnant women and those in puerperium to gain knowledge and positive attitudes towards such endeavours.

CHAPTER 5

SUMMARY, RECOMMENDATIONS, LIMITATIONS AND CONCLUSION

5.1 Introduction

This chapter discusses the extent to which the objectives of the study have been achieved, the limitations that were experienced throughout the study and the recommendations which were based on the research findings.

5.2 Summary

The purpose of the study was to determine the knowledge and attitudes of women regarding MTCT of HIV infection in the Ehlanzeni District of the Mpumalanga Province, South Africa.

The objectives of this study were to:

- Assess knowledge and attitudes of women with regard to MTCT of HIV infection.
- Determine attitudes of women regarding MTCT of HIV infection
- Develop guidelines for the prevention of MTCT of HIV infection.

5.2.1 Research design and method

A qualitative, descriptive and contextual research design was used in this study to investigate and describe the knowledge and attitudes of women regarding MTCT of HIV infection. The researcher focused on the qualitative approach in order to investigate the phenomena in natural settings as they occur (Leedy & Ormrod, 2005; Smith & Hunt, 1997:206; Burns & Grove, 2005:27). The participants were afforded an opportunity to give in-depth accounts of

their lived experiences with regard to the phenomenon studied (Cormack 2001:213; Mouton & Marais 1990:43), i.e., the study sought to discover new facts about the knowledge and attitudes of women with regard to MTCT of HIV infection. The researcher gained insight and an understanding of the phenomenon studied by asking follow-up questions in the semi-structured interview sessions that allowed participants to clarify areas which were not well-defined during data collection (Mouton, 1996:103; de Vos et al, 1998:24; Welma et al, 2008:166). The target population for this study consisted of all pregnant women and those in puerperium at Bourke's Luck and Elandsfontein clinics during the time of data collection. Data were analysed through Tesch's open coding method of qualitative analysis (cited in Creswell 1998:155). An independent coder analyzed and transcribed verbatim transcripts of the data. The independent coder and researcher agreed on the codes reached independently. The criteria of Lincoln & Guba's model of trustworthiness were used: credibility, transferability, confirmability and dependability (de Vos et al ,2006:346; Babbie & Mouton, 2001:276).

5.2.2 Findings of the study

This study revealed that participants shared different interpretations and knowledge of MTCT transmission of HIV infection, but had different attitudes about PMTCT of HIV infection. The knowledge shared by the participants was related to a lack of understanding of the meaning of MTCT and its importance. Four themes and sub-themes have emerged during the application of Tesch's open coding method of qualitative data analysis. The research findings related to theme 1 revealed that the participants had paradoxical knowledge and understandings with regard to MTCT of HIV infection. Theme 1 has three sub-themes that have emerged, that is lack of knowledge of MTCT of HIV infection, lack of understanding of MTCT of HIV infection, and possession of knowledge about MTCT of HIV infection. The study findings linked to theme 2 pointed out that the participants displayed different attitudes towards MTCT of HIV infection. Theme 2 has the following sub-themes: positive attitude

towards the use of MTCT of HIV infection and risky behaviours decision making enhancement. The study findings under theme 3 showed that the participants had different opinions regarding knowledge and understanding of the importance of counselling and testing. Only one sub-theme emerged from theme 3, which is knowledge of HIV status. This research study found that the participants had knowledge about the importance of prevention of MTCT of HIV infection. Two sub-themes were identified under theme 4, namely the importance of prevention of MTCT of HIV infection and the role of ARVs during pregnancy and puerperium.

5.3 Recommendations

5.3.1 Theme 1: Knowledge and understanding about MTCT of HIV infection

- Formal health education programmes with regard to MTCT should be provided to enhance knowledge and understanding of the subject to all clients and patients who visit the healthcare facilities, irrespective of gender, so that even male as partners should be able to acquire and act upon the information.
- The knowledge gap regarding the mode of transmission should be closed by providing an opportunity for health programmers to form partnership with faith-based organizations and community leaders to facilitate access to correct information regarding HIV and AIDS and the prevention thereof.
- Infant feeding counselling and skills development should be integrated into pre-service and in-service training courses of healthcare workers.

5.3.2 Theme 2: Attitudes towards MTCT of HIV infection

- Encourage the involvement of male sexual partners to reduce risky behaviour, increase familiarity with condoms and encourage males to support and participate in MTCT programmes.

- Encourage healthcare providers to demonstrate positive attitudes towards the programme users as this will increase the utilization of MTCT services.
- Encourage formation of HIV and AIDS committees in the community and regular meetings and discussions on issues related to the virus and the syndrome as this will assist community members to familiarize themselves with the subject and develop positive attitudes towards HIV and AIDS programmes.

5.3.3 Theme 3: The importance of counselling and testing

- Strengthen ongoing counselling and mentoring programmes of community counsellors and supervision of community counsellors by facility personnel, sub-districts, HIV and AIDS coordinators and social workers.
- All antenatal women should be counselled about HIV and be informed about PMTCT programmes.
- Each woman who choose to take part in the programme must receive individual pre-test counselling and be tested for HIV. Counselling of HIV infected women should address not only perinatal transmission, but also the socio-cultural and behavioral contexts in which pregnancy decision making takes place.
- Establish community outreach by doctors, nurses and community healthcare workers, and referral of HIV-infected mothers and exposed infants to wellness and treatment programmes.
- Strengthen mass media campaigns to encourage people to test for HIV and assure them that the test is free and confidential.

5.3.4 Theme 4: Prevention of MTCT of HIV infection

- All women should be encouraged to have early confirmation of pregnancy in order to allow sufficient time to implement ART to prevent MTCT of HIV.
- Breastfeeding should be recommended in order to improve the chances of a child to survive in unfavorable conditions because breast milk provides for the infant's fluid, nutritional requirements, antibacterial and antiviral agents that protect the infant from infections or disease.
- Provide formula milk to children of HIV-positive women who choose such and who are eligible to practice replacement feeding.

5.4 Limitations of the study

The study was limited to two clinics in Mpumalanga Province and the findings cannot be generalized to all clinics in the Ehlanzeni District. The independent coder advised that the interviewing process had a limitation in that probing was too shallow in some instances.

5.5 Conclusion

This study was explorative, descriptive, qualitative and contextual in nature. The aims and objectives of the research have been met because the researcher collected quality data through semi-structured interviews and allowed the participants to describe their knowledge and attitudes of MTCT of HIV infection. Probing questions were asked by the researcher in order to pursue in-depth understanding of the phenomenon studied. Tesch's open coding method of qualitative data analysis was used and an independent coder was involved in the data analysis. Limitations of the study have been highlighted, and guidelines and recommendations based on the findings of this study were outlined.

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APPENDIX 1

INTERVIEW QUESTIONS

UNIVERSITY OF LIMPOPO													
FACULTY OF HEALTH CARE SCIENCES													
DEPARTMENT OF NURSING													
DATE	PARTICIPANT'S CODE.....												
1. Highest standard passed													
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Primary School	2												
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College	4												
Technicon/University	5												
2. Religion													
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Lutheran	2												
Methodist	3												
ZCC	4												
Apostolic	5												
Other	6												
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0-3	1												
4-7	2												
8	3												

Question 2

Theme 1: Knowledge and understanding about mother to child transmission of HIV infection

What do you understand by mother-to-child transmission of HIV?

Question 3

Theme 2: The importance of counseling and testing

How can a woman transmit the HIV virus to the unborn baby?

Question 4

Theme 3: Prevention of MTCT of HIV infection

Why is prevention of mother to child transmission of HIV infection important?

Question 5

Theme 4: Attitudes towards MTCT of HIV infection

Do you think it is necessary for pregnant women to be counselled and tested for HIV and why?

APPENDIX 2

SEMI-STRUCTURED INTERVIEW SESSIONS CONDUCTED

(TWO INTERVIEW SESSIONS SELECTED FROM THIRTY FIVE)

PARTICIPANT 4

R – Ok! Good morning once more. You are welcomed to this interview session. During this session, you are free sometimes to express yourself the way you want to. I am going to ask you several questions but firstly a central question which will be followed by those several questions which will be based on your response: What do you understand by mother-to-child transmission and what is your opinion on that or what do think about it?

P4 – Mmmm! [silent] I understand that this means that the mother can transmit the virus to the baby during pregnancy, delivery and through breastfeeding, I am not sure whether I have answered your question but that's what I know about the issue of HIV transmission to the unborn.

R – Can you explain more how the virus can be transmitted to the baby during pregnancy?

P4 – Hmmm! I only know that it can be transmitted during delivery through the baby touching or swallowing the mother's infected blood and or inhaling it during the delivery process but during pregnancy no I really do not understand how it is transmitted.

R – How can a woman transmit the HIV virus to the unborn baby?

P4 – Hei! I can still say no I do not know but let me just try and give you the information that might assist; I think it can be transmitted if the mother does not behave well.

R – Can you describe more on the fact that you indicate that if the mother does not behave well?

P4 – I think maybe it is when the mother does have more sexual partners then the mother have the possibility of having the virus thus it can be transmitted to the baby. Because when someone has too many sexual relationships she ends up getting sexual transmitted diseases and one of them is HIV.

R – Ok and what else do you know?

P4 – It can also be transmitted to the baby through breast milk, that I understand because most of the women in our village who are HIV positive they are told not to breastfeed by the nurses.

R – Is that all what you can say?

P4 – Yes that is all what I know about the HIV transmission.

R – Why is prevention of mother to child transmission of HIV infection important?

P4 – Jooo! I think its importance is that the child can be able to grow well.

R4 – Can you explain further what do you mean by saying so that the child must grow?

P4 - Yes when the mother does not have the virus the child will be able to grow well, because babies who are infected with the virus they are always sick I can realize that because their mothers will always take them for admissions in the hospital or they have frequent visits to the clinic.

R – Do you think it is necessary for pregnant women to be counseled and tested for HIV and Why?

P4 – Hmm! [silent for a while] I will repeat that the baby should be able to grow well, testing will only depend on the mother I cannot say whether it is necessary or not.

R – Thank you for participating in this study. This means a lot to me and it is valuable for this research study. Thank you for your time and sharing with me the knowledge that you have with regard to mother-to-child transmission and what is your view about the MTCT. Thank once more about all the contributions you have made by allowing me to ask this questions.

PARTICIPANT 5

R – Ok! Good morning once more. You are welcomed to this interview session. During this session, you are free sometimes to express yourself the way you want to. I am going to ask you several questions but firstly a central question which will be followed by those several questions which will be based on your response: What do you understand by mother-to-child transmission and what is your opinion on that or what do think about it?

P5 – The virus gets transmitted through the mother’s blood during pregnancy and again it get transmitted through breast milk when you are breastfeeding and lastly it can be transmitted when the pregnant woman have sex with the positive partner during pregnancy then the virus will pass through to the baby.

R – How can a woman transmit the HIV virus to the unborn baby?

P5 – When the HIV positive woman who is pregnant does not follow clinic treatment and guidelines the child will be infected because she will not take treatment that will prevent the virus to pass to the unborn child.

R – Why is prevention of mother to child transmission of HIV infection important?

P5 - So that the child should not be infected by the virus like the mother since the child is innocent.

R – Do you think it is necessary for pregnant women to be counseled and tested for HIV and Why?

P5 – Yes, because it help the mother to know their status while being pregnant and because you will give birth having the knowledge of either you are positive or not unlike giving birth while you do not know your HIV status and you just know by seeing the child starting to be sick after delivery.

R – Thank you for participating in this study. This means a lot to me and it is valuable for this research study. Thank you for your time and sharing with me the knowledge that you have with regard to mother-to-child transmission and what is your view about the MTCT. Thank once more about all the contributions you have made by allowing me to ask this questions.

APPENDIX 3

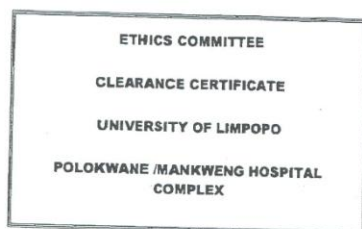
APPROVAL – LIMPOPO PROVINCE GOVERNMENT ETHICS COMMITTEE

APPENDIX 3



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH & SOCIAL DEVELOPMENT



PROJECT NUMBER : 102/2009

TITLE: Knowledge and attitudes of Women Regarding Mother-to-Child Transmission of HIV Infection in the Ehlanzeni District, Mpumalanga Province - South Africa

RESEARCHER: E.V. SECHABE

ALL PARTICIPANTS:

DEPARTMENT : Health Care Sciences

Supervisor : Dr M.N JALI

Co-supervisor : Dr M.E LEKHULENI

DATE CONSIDERED : 19/08/2009

DECISION OF COMMITTEE: RECOMMENDED FOR APPROVAL

DATE: 24/08/2009


PROF A J MBOKAZI

Chairperson: Polokwane/Mankweng

Hospital Complex Ethics Committee

NOTE: The budget for research has to be considered separately.
Ethics committee is not providing any funds for projects.

APPENDIX 4

APPROVAL – MPUMALANGA PROVINCE GOVERNMENT ETHICS COMMITTEE



health
Department:
Health
MPUMALANGA PROVINCE

No. 7 Government Boulevard
Riverside Park
Extension 2
NELSPRUIT
1200

Private Bag X 11285
NELSPRUIT
1200
Tel.: +27 13 766 3429
Fax: +27 13 766 3458

Litiko LateMphilo

UrnNyango WezaMaphilo

Departement van Gesondheid

Enquiries: Molefe Machaba (013) 766 3009/Kate Mathe 3102

6 August 2009

Mrs Edna Virginia Sechabe
P.O BOX 351
Graskop
1270

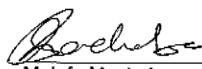
Dear Mrs Edna Virginia Sechabe

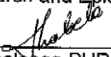
**APPLICATION FOR RESEARCH & ETHICS APPROVAL: KNOWLEDGE AND ATTITUDES OF
WOMEN REGARDING MOTHER-TO-CHILD TRANSMISSION OF HIV INFECTION IN THE
ENHLANZENI DISTRICT, MPUMALANGA PROVINCE, SOUTH AFRICA.**

The Provincial Research and Ethics Committee has approved your research proposal in the latest format that you sent. No issues of ethical consideration were identified.

Kindly ensure that you provide us with the report once your research has been completed.

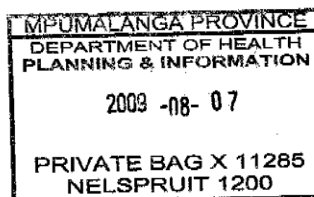
Kind regards,


Molefe Machaba
Research and Epidemiology


Mpumalanga PHREC
Chairperson: Dr Mosa Moshabela

07-08-2009
Date

2009/08/07
Date



APPENDIX 5

CO-CODER REPORT

DATA ANALYSIS EDNA

CODING REPORT

FOR: EDNA VIRGINIA SECHABE

DATE: 2010-06-22

STUDY: KNOWLEDGE AND ATTITUDES OF WOMEN REGARDING MOTHER-TO-CHILD TRANSMISSION OF HIV INFECTION IN THE EHLANZENI DISTRICT, MPUMALANGA PROVINCE, SOUTH AFRICA

BY: DR MARIA SONTU MAPUTLE

Method: Tesch's inductive, descriptive coding technique (in Creswell, 1994:155-156)

was used by following the steps below:

1. The researcher obtains a sense of the whole by reading through the transcriptions carefully. Ideas that come to mind may be jotted down.
2. The researcher selected one interview, for example the shortest, top of the pile or most interesting and went through it asking: "What is this about?" thinking about the underlying meaning in the information. Again any thoughts coming to mind were jotted down in the margin.
3. When the researcher has completed this task for several respondents, a list was made of all the topics. Similar topics were clustered together and formed into columns that might be arranged into major topics, unique topics and leftovers.
4. The researcher took the list and returned to the data. The topics were abbreviated as codes and the codes written next to the appropriate segments of the text. The researcher tried out this preliminary organizing scheme to see whether new categories and codes emerge.
5. The researcher found the most descriptive wording for the topics and turned them into categories. The researcher endeavored to reduce the total list of categories by grouping together topics that related to each other. Lines were drawn between categories to show interrelationships.

6. The researcher made a final decision on the abbreviations for each category and alphabetises the codes.
7. The data belonging to each category were assembled in one place and a preliminary analysis performed.

Table 1 Themes, themes and sub-themes reflecting the knowledge and attitudes of women regarding mother-to-child transmission of HIV infection in the Ehlanzeni District, Mpumalanga Province, South Africa

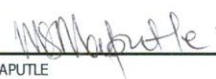
<p>Central storyline: Participants described paradoxical (contradiction) data in terms of knowledge regarding mother-to-child transmission of HIV infection and the participants have comparable attitudes about prevention of mother-to-child of HIV infection. The knowledge shared is related to lack of understanding of the meaning of MTCT and understanding of MTCT and its importance. On the one hand, existing knowledge about prevention of MTCT was reflected by participants as when the mother is saving the baby from being infected with HIV “<i>mother can save the baby from being infected</i>”. To other participants MTCT denotes that the mother does not care about the baby “<i>MTCT is when the mother does not care about the baby that is why she transmit the virus to the baby</i>”. On the other hand, participants shared their understanding of MTCT as the process when the mother transmitting the HIV virus to the infant through different mode of transmission “<i>mother can transmit the virus to the baby during pregnancy, delivery and through breast feeding</i>”. The participants reflected positive attitude towards preventing MTCT. The participants revealed that it is important that the women should be counseled for HIV for the reason that this will assist in knowing own HIV status so that precautions be taken not to infect unborn infant and furthermore it will guide women to seek medical help if found to be HIV positive.</p>	
Main themes	Themes and Sub-themes
<p>1. PARTICIPANTS DESCRIBED PARADOXICAL KNOWLEDGE ABOUT MOTHER-TO-CHILD TRANSMISSION OF HIV INFECTION RELATED TO UNDERSTANDING AND LACK OF UNDERSTANDING OF MTCT.</p> <p>NB: THE 1 IS A MAIN THEME, 1.1 ARE THEMES AND THE 1.1.1 ARE SUB-THEMES and that logic go to 2, 3, and so on.</p>	<p>1.1 Dominant stories of what MTCT of HIV infection is perceived by women attending ante-natal and post natal clinics “<i>saving the baby from being infected</i>”</p> <p>1.1.1 A narrative of lack of knowledge about MTCT of HIV infection</p> <ul style="list-style-type: none"> - A story which is outlining what MTCT means transmitting the HIV virus to the infant because the mother does not care vs. “<i>MTCT is when the mother does not use condoms does the mother will have AIDS</i>”; lack of knowledge is “furthermore it is confusing to these women because MTCT is also related to father transmitting virus to the mother” - Prevention of virus by the doctor - Mode of transmission as from mother to father during sexual interaction - Women with multiple partners - Negative behaviour of the women <p>1.1.2 Possession of knowledge about MTCT of HIV infection</p> <ul style="list-style-type: none"> - Mode of transmission <ul style="list-style-type: none"> o Pregnancy, delivery and breastfeeding as modes

	<p>of transmission for HIV infection from the mother to infant</p> <ul style="list-style-type: none"> ○ Non-adherence to ARV's during pregnancy <p>1.1.3 Importance of prevention of MTCT</p> <ul style="list-style-type: none"> - Availability of treatment to positive women - Impede virus to infect the infant - Prevention of childhood illnesses - Plan in advance for next pregnancies
2. IMPORTANCE OF COUNSELLING AND TESTING	<p>2.1 Knowledge of HIV status "<i>Knowledge of whether one is positive or negative</i>"</p> <ul style="list-style-type: none"> - Saves babies from being infected <ul style="list-style-type: none"> - Precautions not to pass the virus to others including the people living with and the unborn child - Babies will grow well "<i>The baby will be able to grow well</i>" - Panning for the future - Preventing the virus from multiplication (because if one knows her status after counselling precautions will be taken)
3. ATTITUDES TOWARDS MTCT	<p>3.1 Positive attitude towards MTCT of HIV infection</p> <p>3.2 Behaviour decision making enhancement</p> <ul style="list-style-type: none"> - Preventive measures during pregnancy, birth and breast feeding - Practising safer sex - Treatment decision making - Prevention versus cure - Adaptation of positive lifestyle

Saturation of data was achieved related to the major themes and sub-themes).

Limitations to interviewing process

Probing was too shallow in some interview sessions maybe due to the fact that the researcher lack interviewing skill because she is a novice researcher.

X 
 MS MAPUTLE
 DR

APPENDIX 6

CO-CODER CERTIFICATE

Qualitative data analysis

Master degree in Nursing Science

EDNA VIRGINIA SECHABE

THIS IS TO CERTIFY THAT:

Dr. MS Maputle has co-coded the following qualitative data:

27 Individual interviews and field notes

For the study:

**KNOWLEDGE AND ATTITUDES OF WOMEN REGARDING MOTHER-TO-CHILD
TRANSMISSION OF HIV INFECTION IN THE EHLANZENI DISTRICT, MPUMALANGA
PROVINCE, SOUTH AFRICA**

I declare that the candidate and I have reached consensus on the major themes reflected by the data during a consensus discussion. I further declare that adequate data saturation was achieved as evidenced by repeating themes.

Dr Maria Sonto Maputle

Contact No: 0846022063

Signature: *MS Maputle*

Date: *22/06/2010*

APPENDIX 7

LETTER FROM LANGUAGE EDITOR



FACULTY OF NATURAL SCIENCES
DEPARTMENT OF MEDICAL BIOSCIENCES

**the faculty of
Science**

Donavon C. Hiss, Ph.D (Medicine)
University of the Western Cape
Private Bag X17
Bellville, 7535
South Africa

Tel: +27 (0) 21 959 2334
Fax: +27 (0) 21 959 1563
E-mail: dhiss@uwc.ac.za

27 October 2010

To Whom it May Concern

This serves to confirm that I have edited the language, spelling, grammar and style of the MCur Mini-Dissertation by Ednah Virginia Sechabe: "Knowledge and Attitudes of Women Regarding Mother-to-Child Transmission of HIV Infection in the Ehlanzeni District, Mpumalanga Province, South Africa".

Sincerely Yours



Donavon C. Hiss
Ph.D. (Medicine), Dip. Freelance Journalism, Dip. Creative Writing



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