

THE UNIVERSITY OF HULL

**Pregnancy decision making among Thai women living
with HIV: a grounded theory study**

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By

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To remember...this far the Lord has helped me (stone of help)

Abstract

Research regarding pregnancy and women living with HIV does exist, however, in-depth qualitative research about the decision making process concerning around pregnancy and the pregnancy journey for women living with HIV is absent from both the international and Thai literature.

This qualitative research study employs the constructivist grounded theory method to understand and generate a model of the pregnancy decision making process and continue with their pregnancy in Thai women living with HIV. Data collection was done in antenatal clinics (ANCs), at two provincial hospitals located in the Northeast of Thailand. In-depth semi-structured interviews were conducted with 15 HIV positive pregnant women. Data analysis involved open coding, making-memos and using the constant comparative method to develop a grounded theory substantive model of HIV pregnancy decision making.

The substantive model consists of 6 categories; 1) concealing HIV positive status from husband; 2) desire to have a child; 3) becoming pregnant; 4) keeping or terminating pregnancy; 5) accepting a decision; and 6) adapting to a decision. This research finds that the main concerns women living with HIV in deciding to have a child are balancing fear, concealing HIV status and the information that they have in each decision making step. Based on the research findings, a unique process of decision making has been found among these women that related to personal and Thai social beliefs.

This study recommends that health care providers need to pay more attention to counselling women living with HIV and couples by giving sufficient contraceptive information to prevent unplanned and unwanted pregnancy, to support and guide the women who want and plan for pregnancy in advance of this happening and helping women to deal with HIV disclosure issues related to morality and the rights of couples. Moreover, respect and support must be accorded to HIV positive women about their right to have a child if they choose to do so.

Key words: Reproductive decision making, decision making to become pregnant, pregnancy decision making process, grounded theory, women living with HIV.

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Chapter 1

Introduction

1.1 Introduction

The phenomenon of reproductive choice stimulated my interest in the issue of decision making about pregnancy in women living with HIV. I was curious to understand why women living with HIV positive want to become pregnant despite their HIV status and despite the social stigma attached to being pregnant. I also wanted to better understand how these women made the decision to become pregnant. The purpose of this study is to explore the processes and influences underpinning decisions to become pregnant and have a child in Thai women who living with HIV. The main research questions addressed in this thesis are: *“What is the decision making process to become pregnant in Thai women who living with HIV?”* and *“What are the decisions Thai women who living with HIV positive make throughout their pregnancy and how do they make them?”* The study is based on qualitative methodology and employs the grounded theory method of Charmaz (2006) to construct the pregnancy decision making process in Thai HIV positive pregnant women.

I have been working with people living with HIV in the North Eastern region of Thailand for 6 years. My role as a nurse and midwife involves delivering women’s reproductive health care, providing care for people living with HIV and their families in the community as well as in the hospital, providing Antenatal care (ANC) services,

assisting birth as a midwife in the Labour room (LR) and providing care and support to mothers and babies in the Postpartum period (PP). I am also a researcher and in this role I have studied and published research papers related to HIV/AIDS in Thailand and presented this work at international conferences. My published research articles include the following: *Family strength among AIDS patients* (Kownaklai et al., 2009); *Overviews on sexual intercourse of HIV infected people taking Anti-Retroviral drugs: Duty or Happiness* (Rujkorakarn & Kownaklai et al, 2010); *Disclosure of Information by Patients about HIV/AIDS Infection in Northeastern Thailand* (Kownaklai et al., 2012); *Nursing care of HIV infected pregnant women* (Kownaklai & Hornboonherm, 2012), and *Developing denial techniques to avoid unsafe sexual intercourse with a HIV positive partner* (Kownaklai et al., 2014).

In my ongoing fieldwork with people living with HIV, I became aware how choice and decision making around reproduction in women with HIV appeared to be changing. In years past women with HIV did not go on to have children because they appeared to fear the high prevalence of mother to child transmission (MTCT) of the disease. Generally, they adhered to the advice of health care providers who mostly counselled women with HIV not to have children and to undergo sterilization (Paxton et al., 2005; Cooper et al., 2007; Sanders, 2008; Brickley et al., 2009; Gogna et al., 2009; Finocchiaro-Kassler et al., 2010; MacCarthy et al., 2012). More recently however, with the improved quality and efficacy of ART treatment, people living with HIV experience an improved quality of life, they live longer than previously and the rate of mother to child infection has decreased significantly (Sagay et al., 2005; Chersich et al., 2008;

Anderson & Cu-Uvin, 2009; Curran & Jaffe, 2011; WHO, 2013b, 2017a). As a result of these developments, over the past 10 years, women with HIV appear to be making the decision to have children (Cooper et al., 2007; Nobrega et al., 2007; Gogna et al., 2009; Marcellin et al., 2010; Loutfy et al., 2012; Huntington et al., 2013; Hernando et al., 2014).

During my research and practice with Thai pregnant women living with HIV I have asked them about their reasons for getting pregnant. The women all had different reasons, for example, they saw other women who living with HIV having a non-infected child, they needed someone else to take care of them in the future when the disease worsened, they thought that having a child was better than having none and for some it was as a result of contraceptive failure. Some women indicated that the child was someone who would really belong to her, while her partner or husband belonged to someone else. These different responses led me to want to explore the answers to my question about fertility decision making in more depth and it is this that has brought me to this research study and the subject of the thesis.

1.2 The significance of the problem

It is now more than three and a half decades since the first AIDS patient was identified in the US in 1981. Worldwide, between 1981 and 2016, 76.1 million people have become infected with the disease and 35 million of those have died (UNAIDS, 2017a). The UN, reporting on the current situation state that in 2016 there were 36.7 million infected persons, 1 million had died, 1.8 million were new patients and 1.45 million

were pregnant women living with HIV (UNAIDS, 2017a). Currently, there is no drug treatment to cure HIV infection. However, antiretroviral (ARV) drugs can effectively limit duplications of the virus so that people living with HIV can experience improved health and live longer.

In Thailand, the first HIV/AIDS patient was identified in 1984, and the number of patients has continued to increase significantly, reaching more than 1.5 million in 2016¹ (Department of Health, 2016). The number of deaths recorded officially over the last 30 years was 100,617. The most infected groups were the working and reproductive age groups, in the age range 20 to 39 years (77%) providing an indication that the main reason for the spread of HIV was through sexual intercourse (90%). High risk groups in Thailand remain homosexual men, injecting drug users, female sex workers and migrants (Ministry of Public Health, 2016).

More recently, the transmission pattern of HIV/AIDS has involved not only the aforementioned high risk groups, but also the family, through an infected partner. Many women have been infected by a partner, become pregnant and consequently through MTCT the child has been infected. That said, the prevalence of MTCT has decreased from 30-45% to 2-12% with the use of ARVs for the Prevention of Mother to Child Transmission (PMTCT). In developing countries, the MTCT prevalence is estimated to be 3-12% (Sagay et al., 2005; Chersich et al., 2008), while in developed

¹ The latest official statistics released by the Bureau of Epidemiology, Ministry of Public Health 2016

countries, MTCT rates are reported to be less than 2% (European Collaborative Study, 2003; Anderson & Cu-Uvin, 2009).

With reference to MTCT in Thailand, although Thailand's current standard of care of HIV-infected pregnant mothers is considerably better than in the past, the MTCT in 2010-2014 was about 3.5%-3.62%, which was higher than the target set by the country (Department of Health, 2010). However in 2016 the Thai Government, through the Ministry of Public Health, announced success in reducing the MTCT rate from 3.62 to less than 2.0 for the first time in history of the country (Ministry of Public Health, 2016).

HIV infection in pregnant women is considered a high risk for the following reasons: during pregnancy; the transmission of HIV can cross the placental barrier to the foetus (Kennedy, 2003), at the delivery stage; a baby can be exposed to mother's blood and serum (Kennedy, 2003: 37-38), and in the post-delivery stage; high risks are also evident with breast feeding. Furthermore, a child may have to face the difficulty of the loss of a mother infected by HIV, who could die from the complications and pathology of AIDS. The child would then become an orphan at a very young age. These children would subsequently face potential family, social, economic, and mental health problems. HIV-infection can also affect the physical and mental health of the pregnant woman (Kwalombota, 2002; Sae-Han, 2002; Boonpongmanee et al., 2003; Chersich et al., 2008; Ross et al., 2009). The known risks to mother and child are as illustrated

above, but there are also unknown risks and yet despite all of these risks some women living with HIV do make the decision to become pregnant.

1.3 Why would women who living with HIV want to become pregnant?

Research conducted internationally and in Thailand has shown that while many women with HIV express the need to have a child, they do not go on to have one (Cooper et al., 2007; Kanniappan et al., 2008; Carter et al., 2013). However, there is also a body of research revealing that many women living with HIV do intend to get pregnant (Sowell et al., 2002; Nobrega et al., 2007; Gogna et al., 2009; Loutfy et al., 2009 ; Marcellin et al., 2010; Firth et al., 2012; Loutfy et al., 2012; Huntington et al., 2013; Hernando et al., 2014). This is especially true of those women who, after receiving ARV medication for a period of time, experience improved health and return to feeling well, as they did before they were infected (Rujkorakarn & Kownaklai, 2010). This leads these women to think about having sexual intercourse and having a child (Chin-Hong et al., 2005; Bouhnik et al., 2007; Rujkorakarn et al., 2010).

International studies have shown the reasons women who living with HIV go on to have a child include the following; women thought that their infection rate was very low, they trusted in anti-virus medication and medical science, they trusted their health care professional's information and advice on managing their health, they needed to be a mother, and that, after becoming pregnant, they could not have an abortion since it was against their religious beliefs, and the most significant factor was shown to be the desire

to have the child of a partner and family (Taha et al., 1995; Sheri et al., 2004; Nobrega et al., 2007; Chilongizi et al., 2008; Gruskin et al., 2008; Oosterhoff et al., 2008; Suryavanshi et al., 2008; Finocchiaro-Kassler et al., 2010). From research conducted in Thailand, it was found that women who living with HIV believe that having a child is like a gift, a child is like a heart, a child represented succession in the family, and the most significant factor was the husband's desire for a child (Jantararat, 2009).

1.4 Why do I want to do this research?

My experience as a nurse and midwife, and as a researcher, working with women who living with HIV in their reproductive years, has indicated the need for a study which will explore these women's reproductive choices and the influence and involvement of family in their decision making. The initial review of the literature has revealed a lack of research in this area, particularly in Thailand. The study will explore and attempt to understand these decision making issues in context. The expectation of this study is that the results will be of benefit to public health care providers and healthcare services to enable them to understand, manage risk and respect the reproductive decisions made by HIV positive woman. The challenge for the public health sector is in taking care of reproductive-age women who are infected with HIV, who face new life changing choices that will impact and could complicate their future lives as well as those of their family and children.

1.5 Structure of the thesis

The structure of this thesis follows the traditional scientific process in its aim to understand the phenomenon of decision making around reproduction in women living with HIV. It begins by stating the research problem, it sets the study in context, provides a review of the relevant literature, poses the research question, explains the design and method of the study, it presents the findings which are then discussed within the wider body of literature on the topic and it concludes with recommendations. The thesis is organized into 8 chapters and these are summarized below:

Chapter 1 has introduced the study, it addresses the study's primary area of interest and it explains my motivation for wanting to carry it out. It explains how the study originates from my experiences in the field, and from the problems I have identified around reproductive choice in my work with women living with HIV. It also sets out the potential expectations of the study and finally, the chapter details the thesis structure.

Chapter 2 provides the background information to the study and the study context. It provides a summary of the history of the HIV/AIDS epidemic and gives an overview of the worldwide HIV situation. The chapter also outlines current HIV/AIDS treatments, specifically the antiretroviral regimens and it discusses the issue of stigma in relation to HIV/AIDS. The issues of human rights, sexuality and sexual rights as important components of human rights are discussed as well as the issues of women, gender and

women and HIV. The chapter then provides an overview of Thailand, Thailand and HIV, the Thailand health care system, including maternity care and HIV services.

Chapter 3 is a systematic review of the international literature to identify what is known about why women living with HIV choose to become pregnant. The chapter details the methodology of the review and it presents the findings from 81 included studies. The chapter then identifies the gaps in the knowledge base on decision making around reproduction in women who living with HIV and it details the research question and the aims of the study.

Chapter 4 describes the research methodology of the study. It provides a summary of the main differences between quantitative and qualitative research, arguing for a qualitative approach to fulfil the aims of the study. Next, the chapter justifies and explains the selection of Grounded Theory as the approach used in this research study. It also deals with the status and place of literature reviews in the various types of Grounded Theory.

Chapter 5 explains the research methods used to conduct the study. It provides details about the study setting, the practical ethical considerations, details about the sampling strategy and the participants, recruitment, risk management, research safety, transcription quality, and the processes of grounded theory data collection and analysis.

Chapter 6 presents the study findings. The chapter begins with a presentation of the final grounded theory substantive model. The process of ‘balancing’ to manage

pregnancy decisions is then illustrated. The chapter presents demographic data on the participants and it then presents each of the 6 categories that make up the final grounded theory model.

Chapter 7 discusses the study findings in the context of the empirical literature presented in chapter 3. It explores and considers how this study adds to the overall body of knowledge. The chapter also looks at the theoretical context of the grounded theory of pregnancy decision making and it draws out the links between this study and those theories.

Chapter 8 is the final chapter of the thesis, it summarises the study, draws out its main contributions to the knowledge base on pregnancy decision making in women living with HIV, it considers the strengths and limitations of the study and it makes recommendations for policy, practice and further research.

Chapter 2

Background

2.1 Introduction

The aim of this chapter is to present the background information related to the current situation of people living with HIV and to highlight the difficulties experienced by people living with this condition. More specifically the chapter will focus on Thailand, especially on women who living with HIV in the reproductive years, on HIV and pregnancy, and also on the issue of human rights in relation to sexual health and HIV/AIDS.

The background is divided into seventh parts and is structured as follows:

The first part presents current HIV/AIDS situation around the world.

The second part discusses HIV and Anti-retroviral therapy (ART) which was developed, and has evolved to improve the lives and health of people living with HIV. This part also sets out the current ART regime as recommended by the WHO.

The third part of the chapter discusses the issues of stigma and discrimination in society in relation to people living with HIV/AIDS and the difficulties experienced in accessing health and social services.

The fourth part addresses issues about human rights, sexuality and sexual health in relation to people living with HIV.

The fifth part discusses issues pertaining to women, women's rights, women's health, women's sexual health and women's reproductive health.

The sixth part explores gender inequality and HIV, women and HIV, and HIV and pregnancy. This discussion also examines the issue of the transmission of HIV from mother to child, the effects of HIV on the women and infants, and the use of ARV to reduce the transmission of HIV from mother to child.

The seventh and final part of the chapter provides relevant information about Thailand, where this research was conducted. This section provides a brief background to the country and its health care system, including its maternity care system. It also discusses the history of HIV/AIDS in Thailand, and the policies and management of HIV/AIDS in the country.

2.2 Current situation of people who living with HIV

Currently, more than three decades since AIDS first began to spread, UNAIDS reports that worldwide that there have been 76.1 million persons infected with the virus, and 35 million of those have died (UNAIDS, 2017a). In 2017, it was reported that internationally there were 36.7 million infected persons of whom 1 million had died and 1.8 million were new infections. **(See tables 2.1)**

Table 2.1: Global HIV data

	2013	2014	2015	2016
People living with HIV	34.9 million [29.0 million– 40.9 million]	35.5 million [29.5 million– 41.6 million]	36.1 million [30.2 million– 42.2 million]	36.7 million [30.8 million– 42.9 million]
New HIV Infections (total)	2.0 million [1.7 million– 2.3 million]	2.1 million [1.9 million– 2.4 million]	1.9 million [1.6 million– 2.2 million]	1.8 million [1.6 million– 2.1 million]
New HIV infections (aged 15+)	1.8 million [1.5 million– 2.0 million]	1.7 million [1.5 million– 2.20million]	1.7 million [1.5 million– 2.0 million]	1.7 million [1.4 million– 1.9 million]
New HIV infections (aged 0–14)	220 000 [160 000– 280 000]	190 000 [130 000– 260 000]	170 000 [110 000– 240 000]	160 000 [100 000– 220 000]
AIDS-related deaths	1.2 million [1.0 million– 1.4 million]	1.1 million [940 000– 1.3 million]	1.1 million [880 000– 1.3 million]	1.0 million [830 000– 1.2 million]
People accessing antiretroviral therapy	13.1 million [11.6 million– 13.7 million]	15.1 million [13.3 million– 15.7 million]	17.1 million [15.1 million– 17.8 million]	19.5 million [17.2 million– 20.3 million]
Resources available for HIV (low- and middle-income countries)	US\$ 19.5 billion*	US\$ 19.2 billion*	US\$ 19.0 billion*	US\$ 19.1 billion*

* Includes countries classified as low- and middle-income level per the World Bank 2013 classification

Source: UNAIDS (2017a).

2.3 HIV and Antiretroviral therapy (ART)

Antiretroviral therapy (ART) enables people who are living with HIV/AIDS to improve their lives, dignity and productivity. Moreover, it significantly prevents further

transmission of HIV (Curran & Jaffe, 2011). UNAIDS (2011) state that people have a basic human right to access quality preventions, ART and treatments (UNAIDS, 2011). Curran and Jaffe (2011) state that there have been a number of innovations in the field of HIV/AIDS and list ART among these. They summarise as follows:

“.....these innovations includeidentification of zidovudine (AZT), the first antiretroviral (ARV) drug; use of ARVs to reduce perinatal transmission; effectiveness of prevention in many communities through counselling and testing,..... Finally, development of the three-drug ARV regimen (highly active antiretroviral therapy (HAART) has saved the lives of millions of persons with HIV infection in both the developed and developing worlds” (Curran & Jaffe 2011:6).

Currently, HIV can be suppressed by combination ART which consists of 3 or more ARV drugs. Although ART does not cure HIV infection, it controls viral replication within a person's body and allows a person's immune system or CD4 cells² to strengthen and regain the capacity to counter the virus (WHO, 2014a). In 2018 the WHO (2018) announced the early-release guidelines recommending that antiretroviral therapy (ART) should be initiated in everyone living with HIV at any CD4 cell count instead of CD4 350 cells/mm³ in 2013.

² CD4 cells= CD4 cells or T-cells are a type of white blood cells that play a major role in protecting human body from viruses or bacteria infection.

In addition, WHO recommended a new first-line ART³ in 2013 which is a combination of TDF⁴+ 3TC⁵ (or FTC)+ EFV⁶ (See table 2.2).

Table 2.2: Summary of first-line ARV regimens for adults

First-line ART for adults (including pregnant and breastfeeding women and people with TB and HBV coinfection)	
Preferred regimens	TDF + 3TC (or FTC) + EFV
Alternative regimens	AZT + 3TC + EFV (or NVP) TDF + 3TC (or FTC) + NVP
Special circumstances ^c	Regimens containing ABC, d4T ^b and boosted PIs

Source: (WHO, 2013b).

In addition, UNAIDS set the fast track target of **90-90-90** that “By 2020, 90% of all people with HIV will know their HIV status, 90% of all people with HIV will receive antiretroviral therapy, 90% of all people receiving ART will have viral suppression” (UNAIDS, 2017b).

³First line ART is the regimen of ARVs that was selected first because it is simple, less toxic and can be used in all populations except for very young children (see figure 2.4).

⁴ TDF= tenofovir

⁵ 3TC or FTC= lamivudine or emtricitabine

⁶ EFV= efavirenz

2.4 AIDS related to stigma and discrimination

Although HIV/AIDS has a relatively long history, and the number of people with HIV/AIDS has increased, the associated stigma and discrimination experienced by those with the disease persists even today (AIDS Education & Research Trust, 2014a). HIV/AIDS related stigma and discrimination refers to negative attitudes, prejudice, and all forms of abuse directed towards people who are living with HIV/AIDS (AIDS Education & Research Trust, 2014a). Most people who are living with HIV/AIDS around the world report having experienced stigma. The sources of reported stigma were from family, community and health care providers (Lancioni et al., 1999; Paxton et al., 2005; Sanders, 2008; Gogna et al., 2009; Cuca et al., 2012; MacCarthy et al., 2012).

HIV/AIDS related stigma makes life difficult for those with the condition, it is a barrier which obstructs individuals equal and quality access to services, it erodes their human rights, results in poor treatment in healthcare and education settings, and limits access to HIV testing, counselling, and other treatments and services (AIDS Education & Research Trust, 2014a). Stigma and discrimination may lead to mental depression and suicidal thoughts (Kwalombota, 2002). People living with HIV/AIDS avoid disclosing their status to others because of the resulting high levels of stigma and avoidant behaviour of others (Makin et al., 2008). It might also promote the spread of the virus to others, whether the patient is aware or not, because the patients fear, prejudice and

associated shame about their HIV status leads to them not disclosing their HIV status to relevant others. It also results in them not receiving the appropriate health care.

2.5 Human rights, sexuality and sexual health constitute sexual rights

The United Nations (UN) announced in the Universal Declaration of Human Rights that human rights are fundamental freedom, justice and peace in the world (Office of the High Commissioner for Human Rights, 1996-2015b). Human rights cover the right to equality, the right to be free from torture and cruelty, the right to privacy, the right to health, the right to marry, the right to education and information, the right to freedom of opinion and expression, and the right to an effective remedy for violations of fundamental rights. Universal human rights are often expressed and guaranteed by individual governments and international laws in order to promote and protect human rights and the fundamental freedoms of individuals or groups (Office of the High Commissioner for Human Rights, 1996-2015c). Human rights are related to and encompass sexuality, sexual health and sexual rights (Department of Reproductive Health and Research, 2010; WHO, 2010a; Gruskin, 2010a:3; WHO, 2010b). The WHO state that:

“The application of existing human rights to sexuality and sexual health constitute sexual rights. Sexual rights protect all people's rights to fulfil and express their sexuality and enjoy sexual health, with due regard for the rights of others and within a framework of protection against discrimination” (WHO, 2006a; 2010 available online).

Sexual health may be considered to be a broad concept which covers the desire of individuals and couples to a pleasurable sexual life, it includes fertility and reproduction and also such issues as sexual dysfunction and sexual violence (Department of Reproductive Health and Research, 2010). Sexuality and sexual health are fundamental to health and well-being, there is a holistic relationship with many factors because of its complexity and sensitive issues such as biological, social, emotional, psychological, cultural and spiritual dimensions, and they influence human sexuality and sexual behaviour (Hayter, 2013).

The declaration of sexual rights by the World Association for Sexual Health (2014) stated that rights critical to the realisation of sexual health include: the right to the highest attainable standard of health (including sexual health), the right to marry and to form a family, the right to equality in, and at, the dissolution of marriage, the rights to decide to have a child, as well as the number and spacing of the children (World Association for Sexual Health, 2014).

People living with HIV/AIDS must be respected because in addition to them having human rights, they also have and should be protected by, sexual rights. Sexuality and sexual relations are central to human reproductive and sexual health. To eradicate stigma and discrimination, people living with HIV/AIDS should be made aware of their human and sexual rights and also empowered to take action to protect themselves from violence and inequality. Moreover, together with promoting human rights in public

awareness, it is important to promote the sexual rights of people living with HIV/AIDS in order to remove the stigma related barriers in society.

2.6 Women: Women's rights, women's health, women's sexual health and women's reproductive health

Women's rights

"Women's rights are human's rights" is the statement the United Nations have made with respect to gender equality and this statement is at the very heart of human rights and the United Nations values in relation to human rights (UN, 2014). A fundamental principle of the United Nations Charter, adopted by world leaders in 1945, is that of *"equal rights of men and women"* (United Nations, 2014). Further, they state that protecting and promoting women's human rights is the responsibility of all States (Office of the High Commissioner for Human Rights, 1996-2015a). Despite this, millions of women around the world continue to experience discrimination, for example: laws and policies prohibit women from equal access to land, property, and housing in many countries. Moreover, economics and social discrimination result in fewer and poorer life choices for women (Office of the High Commissioner for Human Rights, 1996-2015 b). Many studies show that at least 30% of women are the victims of gender violence and that women are denied their sexual and reproductive health rights. In addition to this, some groups of women face compounded forms of discrimination due to factors such as their age, ethnicity, disability, or socio-economic status in addition to their gender (Office of the High Commissioner for Human Rights, 1996-

2015b). Significantly, data from gender based violence studies have found that there is strong association between gender based violence and mental health problems in women (WHO, 2002).

Women's health

Women's health covers all stages of women's lives; from birth to death, infancy to old age (WHO, 2013a). Worldwide women experience unique health and related issues relevant to their gender; women live an average four years longer than men, girls are far more likely than boys to suffer sexual abuse, 99% of maternal deaths every year occur in developing countries, breast cancer is the leading cause of death among women aged 20–59 years, while cervical cancer is the second most common type of cancer in women (WHO, 2013a).

Women's reproductive health

Women's reproductive health is related to sexual health, sexual rights and human rights (WHO, 2010b, 2013a). Reproductive health covers life from puberty to post-menopause (Andrews, 2005). The reproductive age in women is between 15-44 years and at all stages of their reproductive years, women face various health problems (WHO, 2013a). For example, some *young girls* (15-19 years) and *young women* (19-24 years) face the complications of pregnancy and childbirth, lack of contraception availability and provision, unsafe sex, adolescent pregnancy, STIs, substance use (tobacco and alcohol), nutrition and diet related malnutrition and obesity, violence, and mental ill health. *Adult women* (20-59 years), some face mortality and burden diseases

for example: maternal ill health, HIV/AIDS, STIs, cervical cancer or reproductive organ tumours and malignancy, infertility, violence, mental ill health including depression and suicide and chronic diseases. *Older women* (60 years and over), some face chronic diseases such as the cardiovascular diseases and cancers, disability, health regression and mental ill health (WHO, 2013a).

In addition, women's sexual and reproductive health is related to multiple human rights. This means that states have obligations to respect, protect and fulfill rights related to women's sexual and reproductive health (Office of the High Commissioner for Human Rights, 1996-2015b). Violence against women is widespread around the world: the most recent available figures indicate that 35% of women worldwide have experienced either intimate partner violence or non-partner sexual violence in their lifetime (WHO, 2013a). On average, 30% of women who have been in a relationship have experienced some form of physical or sexual violence by their partner. Globally, 38% of murders of women are committed by an intimate partner (WHO, 2013a).

To summarise, from the cradle to the grave, women face many health problems affecting their morbidity and mortality. Women's reproductive health is related to sexual health, sexual rights and human rights. Women should be able to independently make a decision about their reproductive choices and have equal access to health services regardless of gender.

2.7 Gender and HIV

The latest HIV prevalence among women and men, newly infected, is reported by UNAIDS (2017a) to be about 1.8 million in 2016, and 1.7 million of those people are aged 15 or more. In HIV infection among young people aged 15-24 years, more than 59% of these are in young women. Globally, adolescent girls and young women (15-24 years) are twice as likely to be at risk of HIV infection compared to boys and young men in the same age group (WHO, 2013a; KaiserFamilyFoundation, 2014). This higher risk of HIV is associated with unsafe and often unwanted and forced sexual activity (WHO, 2013a). For women aged 15-44 years, HIV/AIDS is the leading cause of death worldwide, with unsafe sex being the main risk factor in developing countries. A lack of access to information and health services, economic vulnerability and unequal power in sexual relations exposes women, particularly young women, to HIV infection (WHO, 2013a). Gender inequalities, differential access to services, and sexual violence increase women's vulnerability to HIV, and women, especially younger women, are biologically more susceptible to HIV (KaiserFamilyFoundation, 2014).

2.7.1 Women and HIV

Women's particular vulnerability to HIV infection stems from a combination of biological factors and gender inequality. Firstly, with respect to biological factors, women have a large mucous membrane surface area exposed to HIV in the secretions during sexual intercourse. Men have less mucous membrane surface area although male-male anal sexual intercourse can often pose a high risk of HIV for the receptive

male partner because the rectum is thin and easy to tear (Bott, 2005). Secondly, in terms of gender inequality, for women, early marriage and sexual intercourse at a younger age makes women less likely to be able to negotiate safer sex with their partners (Bott, 2005). Moreover, poverty, lack of education and limited income may force some women into commercial sex work and subsequently lead them to a high risk of STIs and HIV/AIDS (WHO, 2013a; Bott, 2005).

In addition, many studies and organizations have reported that women suffer from more HIV-related illnesses than men in both number and severity. For example, Fried and Kelly (2011) and WHO (2013a) indicate that gender-related barriers in access to services prevent women from accessing HIV prevention, treatment and care, and women may face barriers due to their lack of access to and control over resources, their child-care responsibilities, restricted mobility and limited decision-making power. Violence against women (physical, sexual and emotional), which is experienced by 10 to 60% of women (ages 15-49 years) worldwide, and increases their vulnerability to HIV (Fried & Kelly, 2011; WHO, 2013a).

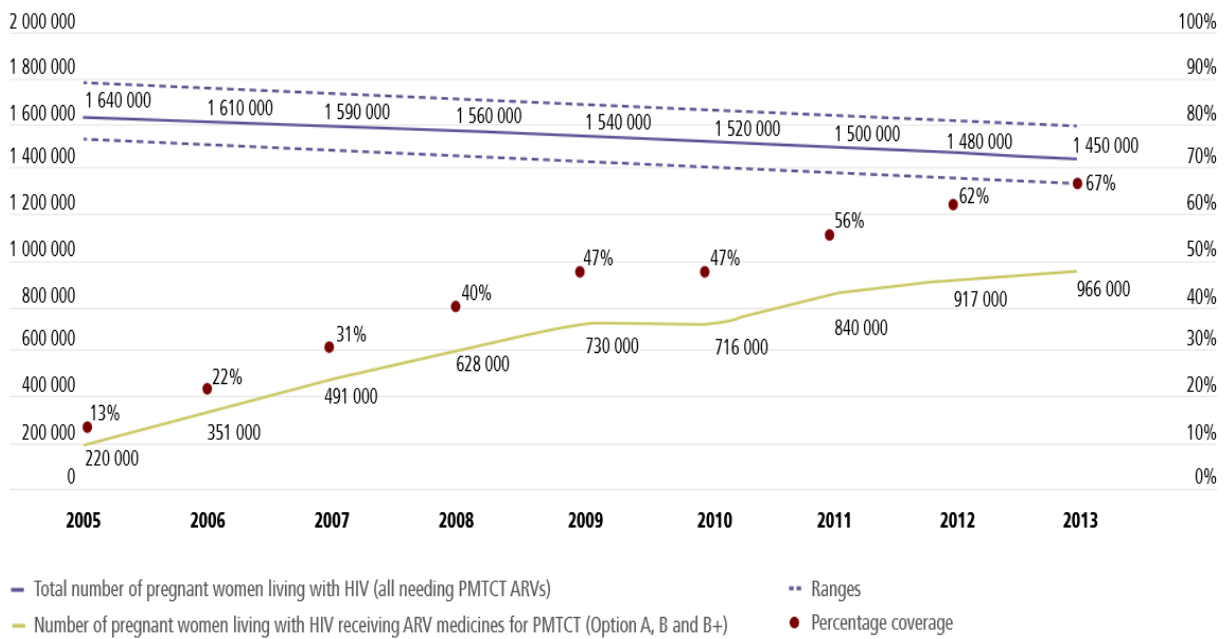
2.7.2 HIV and pregnancy

2.7.2.1 Epidemiology of the number of pregnant women living with HIV

In 1982, one year after the first AIDS patient was identified, AIDS cases also were reported among infants, female sex partners of men with, or at high risk for AIDS, and in infants and adults who had received blood transfusions (Curran & Jaffe, 2011). Taken

together, these cases provided strong evidence that AIDS was caused by an infectious agent that could be transmitted by blood, and from mother to child, as well as through homosexual and heterosexual unprotected sex. Since then, the number of pregnant women who are living with HIV has increased dramatically (Curran & Jaffe, 2011). The number of pregnant women with HIV were reported to be up to 1,640,000 in 2005 and very slightly decreased to 1,450,000 in 2013 (excluding high-income countries) (WHO, 2014c). (See **Figure 2.1**).

Number of pregnant women living with HIV in low- and middle-income countries and the number and percentage of those women receiving ARV drugs for PMTCT of HIV, 2005–2013



Single-dose nevirapine is included in the data for 2005 to 2009.

Sources: Global AIDS Response Progress Reporting (WHO/UNICEF/UNAIDS) and validation process for the number of pregnant women living with HIV receiving ARV drugs for PMTCT, and UNAIDS 2013 estimates for the number of pregnant women living with HIV.

Figure 2.1: Number of HIV positive pregnant women (2005-2013)

Source: WHO, 2014c

2.7.2.2 How HIV is transmitted from mother to child

The transmission from mother to child, called '*vertical transmission*' can take place in pregnancy, during the birth and postpartum period. During pregnancy, there is evidence that the transmission of HIV can cross the placental barrier to the foetus (Kennedy, 2003: 37). At delivery the risk of infection from mother to child is especially high with the premature rupture of membranes (PROM), prolonged rupture of membranes with resultant chorioamnionitis and prolonged labour (Kennedy, 2003). At the delivery stage, from tears in the vaginal tissues, and where the baby is exposed to blood, serum, mucous and amniotic fluid during the delivery. In the postpartum period, high risks are also evident with breast feeding (Kennedy, 2003).

2.7.2.3 The effects of AIDS on mothers and infants health

Pregnancy with HIV can increase morbidity and mortality in both women and infants. Firstly, not only could infants be infected with HIV by their mothers but they are also affected by complications before and after delivery for example intra-uterine retardation (IUGR), low birth weight, and premature delivery. A high mortality rate in infants 4-6 months after delivery was seen in those with IUGR (Chilongizi et al., 2008). Moreover, complications that cause death to infants, not infected from the mother, after birth were diarrhoea, pneumonia and failure to thrive (Taha et al., 1995). Furthermore, for a long period of time after delivery a child has to face the difficulty of the potential loss of a mother infected by HIV, who may die from the complications and pathology of AIDS. The child would then become an orphan at a very young age. Secondly, with respect to

mothers, the effects of HIV is on their physical and mental health (Kwalombota, 2002; Boonpongmanee et al., 2003; Ross et al., 2009). The morbidity and mortality rates in women who living with HIV are increased compared with those in uninfected women during the year following delivery (Chersich et al., 2008). With respect to mental health status, HIV positive pregnant women have significantly higher depression rates than HIV negative pregnant women (Sae-Han, 2002), and most of the women who living with HIV had suicidal thoughts (Kwalombota, 2002).

2.7.2.4 The Prevention of Mother to Child Transmission (PMTCT)

In the absence of any interventions during pregnancy, delivery and the postpartum stages, rates of HIV transmission from mother-to-child can be between 15-45% (WHO, 2017a). In contrast, mother to child transmission (MTCT) can be nearly fully prevented if both the mother and the child are provided with ARV drugs throughout the stages when infection could occur (WHO, 2017a). In 2016, 76% of the estimated 1.4 million pregnant women living with HIV received effective antiretroviral drugs to avoid transmission to their children (WHO, 2017a).

ART guidelines for pregnant women

The WHO's guidelines for the prevention of MTCT (PMTCT), issued in 2016 includes a recommendation to provide ARV to mothers during pregnancy and labour and to mothers and infants in the post-natal period (WHO, 2013b). Their guidelines issued in

2015 recommend offering life-long treatment to HIV positive pregnant women regardless of their CD4 count (WHO, 2013b; WHO, 2017b).

In 2013, the WHO launched the ART guidelines recommending the use of the preferred first-line treatment regimen for all pregnant and breast feeding women. The recommendation applies both to lifelong treatment and to ART initiated for PMTCT and then stopped, as follows:

- **Women**

- A once-daily fixed-dose combination of TDF + 3TC (or FTC) + EFV. To use this regimen as first-line ART in all pregnant and breastfeeding women (WHO, 2013b; 2017b).

- **Infants**

- Infants born to mothers who are receiving ART and are breastfeeding should receive 6 weeks of infant prophylaxis with daily NVP⁷.

- Infants born to mothers who are receiving ART and are receiving replacement feeding, should be given 4-6 weeks of infant prophylaxis with daily NVP (or twice-daily AZT⁸).

- Infant prophylaxis should begin at birth or when HIV exposure is recognised postpartum (WHO, 2013b: 100-103).

⁷ NVP= Nevirapine

⁸ AZT= Azidothymidine or Zidovudine

In addition, in 2015, the WHO released the new guidelines as to when to start ART in pregnant and breastfeeding women (WHO, 2017a; 2017b). They state that “*ART should be initialled in all pregnant and breastfeeding women living with HIV regardless of WHO clinical stages and at any CD4 cell count and continue lifelong*” (WHO, 2017b: 30).

In conclusion, HIV can be transmitted from mother to child throughout the period of pregnancy, the delivery stage and the postpartum period and it can affect both mother and infant health and well-being in the short and long term. Although ARV drug treatment will nearly completely address the mother’s disease symptoms and the MTCT, some factors, like stigma and maternal mental health, remain complex and difficult to address.

2.8 Thailand

2.8.1 Location and people

Thailand is located in South East Asia, a member of 10 countries in the Association of South East Asian Nations (ASEAN). The country covers an area of 513,115 square kilometres with the north bordered by Myanmar and Laos, the south by Malaysia and the Gulf of Thailand, the east by Laos and Cambodia, and the west by Myanmar and the Andaman Sea. The climate is hot and humid. The population of Thailand (2015) is 67,959,000 (WHO/Thailand, 2017). The majority of the population are Thai residents (96%) and the rest are from other nationalities including from China, Malaysia,

Cambodia, Laos and other minorities including the hill tribes (Asia Pacific Observatory, 2015). For communication purposes, the Thai language is the official language used for speaking and writing, while English tends to play a greater role particularly in the business sector. Most Thai people are Buddhists (93%) followed by Muslims (5.4%), Christians (0.9%) and others (The Kingdom of Thailand Health System Review, 2015). Thailand has the King as head of the country and the Prime Minister is the head of the government.



Figure 2.2: Thailand map

Source; (WP_Map, 2014).

2.8.2 The health care system in Thailand

According to the 2003 Constitution of the Kingdom of Thailand, health is declared a fundamental human right of the citizen and the national health system must be strengthened for satisfaction of the entire population:

“Accountability and policies of Thai government is to ensure that health care is one of the priority strategies. In health system section, the health security system serves as a fundamental life security which gives a person confidence that they will be able to satisfy in appropriate health behaviours from all level of health professionals and get access to any health activities and services needed without obstacles, health security system should provide quality health care to all citizens by equal respect” (Ministry of Public Health, 2008-2010).

The Thailand health service consists of three sectors; government health service, non-profit health organisations for example, the Thai Red Cross and the private sector (Angloinfo, no date). The Thai government funded health care system and the Ministry of Public Health are responsible for public health services, government hospitals and medical services. An overview of health services in Thailand reveals that it offers good services for clients, however, the state hospitals are crowded and have long waiting lists and times (Angloinfo, no date).

There are three health service levels in Thailand. The Primary Care Level; called the Primary Care Units (PCUs) or community health centres which take care of people in

the community in a holistic way providing health services including home visits, counselling and referrals. The Secondary Care Level; the medical and public health services performed by a physician with medium level expertise in hospitals and within this service are district hospitals (holding 10-150 beds) and provincial general public hospitals (less than 500 beds). The Tertiary Care Level; the medical and public health services performed by a physician with advanced expertise or specialism, the type of hospitals providing this service are provincial general public hospitals (more than 500 beds) and Medical School or University Hospital (Mahasarakham University, no date).

Medical Welfare in Thailand is divided into four categories: First, most Thai citizens (76.1%) hold a Universal Health Coverage (UC) card. Second, a social security card for employees (12.3%). Third, the official and State enterprise card for public servants, and fourth, individual health insurance and private insurance cards (0.9%). Groups such as no insurance (2.6%) and other (0.4%) are also reported (Ministry of Public Health, 2008-2010). Universal Health Coverage (UC) is free for all treatments and services. UC is a system of life security which gives a person confidence that they will be able to gain access to treatment, disease prevention, health care services and health promotion, including ART for people who living with HIV.

2.8.3 Thailand's health problems

Although the medical and health services are more developed than in the past, Thailand still has a high overall rate of mortality. It is second out of 10 in the ASEAN (Association of South East Asian Nations) countries with Myanmar in the first place

(the death rate in Thailand is 8:1,000 population while in Myanmar it is 9:1,000). Life expectancy according to the latest available statistics at birth in Thailand (2010-2015) for males is 71.9 years and for females it is 78.8 years. Thailand's lifespan comes fourth out of 10 in the ASEAN countries (Bureau of Policy and Strategy, 2013; Worldlifeexpectancy, 2017).

HIV/AIDS was the seventh from the top 10 causes of death and sixth of the top 6 of major diseases contributing to the death rate in Thai people in 2014. The top 10 causes of death in Thailand are listed below:

1. Coronary heart disease (87.08*)
2. Stroke (65.52*)
3. Influenza and Pneumonia (60.40*)
4. Road traffic accidents (33.57*)
5. Lung diseases (29.97*)
6. Diabetes Mellitus (26.11*)
7. HIV/AIDS (25.92*)
8. Liver Cancer (23.50*)
9. Lung cancers (21.90*)
10. Kidney disease (16.08*)

*= Death rates per 100,000 population

Source: (Worldlifeexpectancy, 2017).

The top 6 major diseases attributable to the death rate (%) of Thai people are:

1. Coronary heart disease (15.71%)
2. Stroke (11.82%)
3. Influenza and Pneumonia (10.69%)
4. Road traffic accidents (5.70%)
5. Lung diseases (5.39%)
6. HIV/AIDS (4.72%)

Source: (Worldlifeexpectancy, 2017).

The prevalence of mental disorders in Thai's population are; psychosis, anxiety disorder, major depression, learning disability and epilepsy (Bureau of Policy and Strategy, 2013).

It is also experiencing a shortage of medical professionals and a disproportionate number of providers and patients. The ratio of health care professions per population (2007-2011) are:

- Physician 1:2,535
- Dentist 1:11,244,
- Pharmacist 1:6,425 and
- Nurses 1:498

Source: (Bureau of Policy and Strategy, 2013).

2.8.4 Women's sexual health problems in Thailand

Sexually Transmitted Infections (STIs)

The bureau of AIDS, TB and STIs (2015) reported that in the last 5 years (2010-2015), the number of people with STIs has risen 3.75%. In 2015, the top 5 STIs were Gonorrhoea (6,821*), Syphilis (3,070*), Chlamydia/Non Gonococcal Urethritis (2,076*), Chancroid (631*) and Lymphogranuloma venereum (180*) (*per 100,000 population), among those infected people there were more females than males (ratio 2.1:1). The trend of STIs is one that is increasing every year and the most affected people were those among the reproductive-age group 15-24 years and 25-34 years. (Bureau of AIDS TB and STIs, 2015).

Adolescent pregnancy

Although Thailand has made progress in reducing the overall birth rate the number of pregnancies among teenagers aged less than 20 years and the birth rate among adolescents are increasing every year (11.9% of adolescent age 10-19 years) (Reproductive Health Division, 2016a). The adolescent pregnancy rate in Thailand is 74:1,000, Adolescent birth rates are highest for mothers aged 15-19 years (42.5:1,000), and the birth rates for mothers aged 10-14 years is 1.4:1,000 (Thailand Reproductive Health Database, 2016). Pregnant adolescents are also more likely to seek an abortion than adults. Complications from pregnancy and childbirth are an important cause of

death among girls aged 15–19 in low- and middle-income countries including Thailand (WHO, 2017c).

Abortion situation in Thailand

Thailand's laws and religion do not support abortion. Abortion is therefore illegal with heavy fines and sentences for the women who seek one and also for those who carry them out (Kusalanan,2011). However, an exception can be made to help the mother if her life is threatened due to her pregnancy. There are many conditions and diseases that can be included in this exception but these criteria exclude healthy HIV positive pregnant women (Kusalanan, 2011; Youngwanichsetha et al., 2010).

Despite this, illegal abortions do occur in Thailand. Official recent records by the Reproductive Health Division (2016a) report that of all the women who had an abortion in 2015, 59.7% of these were spontaneous abortions and 40.3% were induced. The reasons given for the induced abortions include an unintentional pregnancy (73.3%) and contraceptive failure (46.2%) (Reproductive Health Division, 2016b). Unsafe abortions contribute substantially to lasting health and mental health problems and maternal deaths.

Maternal mortality

One third of the causes of maternal deaths are reportedly attributable to the inappropriate management of labour and two thirds from maternal diseases such as Pregnancy Induced Hypertension (PIH), Gestational Diabetes Mellitus (GDM), Heart

Disease and Thalassemia (Bureau of Policy and Strategy, 2014). In Thailand, the maternal mortality ratio in 2015 was 20:100,000 population, significantly higher than the target which was set at 13:100,000 (WHO, 2017c). The Ministry of Public Health has analysed the root causes and contributors to this statistic and found that the reasons for the high maternal mortality rate were because of non-standard prenatal care, pregnant women attending late (gestational age of 12 weeks) for their first antenatal care, there was an inappropriately high risk pregnancy referral system, lack of obstetric care, midwives and also medical equipment in ANC and the labour room (Bureau of Policy and Strategy, 2014).

Other statistics which related to maternal and child care in Thailand are as follows:

- Births per 1,000 population in Thailand in 2011 was 12:1,000. This is the second lowest in the ASEAN countries and is next to those of nearby Singapore.
- Neonatal mortality rate was 8:1,000 live births. The national target which was set at 10:1,000 (Bureau of Policy and Strategy, 2014).
- Fertility rate was 1.6 (number of total children born to one woman through the reproductive years).
- Contraceptive prevalence (2005-2012) was 80% and this is highest in the ASEAN countries.

(Source: Bureau of Policy and Strategy, Ministry of Public Health, 2013; 2014).

2.8.5 Thailand and HIV

2.8.5.1 AIDS situation in Thailand

Thailand encountered its first HIV/AIDS cases in 1984, and the number of patients has continued to increase significantly (Ministry of Public Health, 2014; 2016). These statistics are reported in the Ministry of Health Annual Statistics (Ministry of Public Health, 2016) who have monitored the status of HIV/AIDS from 1984 to the 31 October 2016. The number of people living with HIV/AIDS increased by more than 1.5 million in that time, although it was found that just 388,621 were registered in the health system. It is estimated the majority of infected people were not recorded and had not received treatment because most of them did not know their HIV status. The annual statistics report points out that some people with HIV may have experienced shame, stigma and fear associated with the disease as well as a lack of knowledge, lack of money and time to go to hospital. For some there were limited available services and some showed a lesser degree of self-concern (Ministry of Public Health, 2016). The number of deaths over the 30 year period is 100,617 (officially recorded deaths) and the most infected groups were among the working age group and those in their reproductive age, 20 to 39 years old (76.66%) indicating that the main reason for the spread of HIV/AIDS was through sexual intercourse (90%). High risk groups still remain in

homosexual men, injecting drug users, female sex workers and migrants⁹ (Ministry of Public Health, 2016).

In addition, the number of people living with HIV/AIDS as well as the number of deaths due to HIV/AIDS has decreased as treatments have improved over the years (WHO, 2013b; UNAIDS, 2014). Patients live longer and their quality of life is better (UNAIDS, 2014; WHO, 2013b). The result of this is that some infected people aspire to having the same sexual relationships as those without the disease (Rujkorakarn et al., 2011). This thinking could sometime leads to unsafe sex behaviours and some women who living with HIV becoming pregnant.

2.8.5.2 Comparisons between HIV and ART in the UK and Thailand

Table 2.3: HIV data in the UK and Thailand

Data	The first patient was identified (year)	Population	Number of people living with HIV/AIDS	AIDS-related deaths	New HIV infections	Adult HIV prevalence	MTCT rate	Adult on ART
*United Kingdom	1981	~65 millions	101,200	594	6,095	0.16%	0.27 %	96%
**Thailand	1984	~ 67 millions	450,000	16,000	6,400	1.10%	< 2%	68%

Source: * AVERT (2016a), www.avert.org, ** AVERT (2016b), www.avert.org

⁹ migrants: There are a lot of illegal and legal migrant workers (Burmese, Cambodian, Laotian and Vietnamese) in Thailand, these migrants have limited accessed to services and information regarding to HIV/AIDS prevention and treatments

2.8.5.3 AIDS and ART management in Thailand

The current effective treatment of AIDS is ART. It is a treatment combined with opportunistic infections treatment and other health promotion activities like the protection of secondary infections and the importance of self-care in patients; such as, taking medication regularly and on time, adequate nutrition and hydration, as well as exercise and rest. In addition, the Ministry of Public Health has promoted a programme which includes free twice yearly blood examinations for Thai people as well as an ongoing safer sex campaigns targeted at groups such as adolescents and couples (Department of Disease Control, 2014).

The Ministry of Health has provided antiretroviral drugs to people living with HIV/AIDS by using the combination of 3 ARV regimens since the year 2000 by following WHO guidelines. The numbers initially receiving these drugs was limited, but since 2004 the opportunities for more patients to access the programme under the NAPHA (National program of Antiretroviral therapy for people who living with HIV and AIDS) has been increasing. Currently, the antiviral drugs have expanded into Universal Health Coverage (UC) treatments and services, which means that all HIV-infected patients can access antiretroviral therapy from government hospitals everywhere in Thailand. See **table 2.5** which s details the indicators for initiating ART in Thailand.

Table 2.4: Indication for initiating ART in Thailand

Symptoms	CD4 level	Indications of ARV
AIDS	Regardless of CD4	Start ARV
Symptomatic HIV	Regardless of CD4	Start ARV
Asymptomatic HIV	<200	Start ARV
Asymptomatic HIV	>200	Follow CD4 levels regularly, CD4 350-200 follow up every 3 month CD4 >350 follow up every 6 month
*2014, new policy, start ART regardless CD4 level (*Source: Department of Disease Control (2014).		

Source: Chatchotisak (2009).

2.8.5.4 Mother to child transmission (MTCT) policy and management in Thailand

Thailand's current standard of care for HIV-infected pregnant mothers is considerably better than in the past, however, the infection transmission from mother to child during the period 2010-2014 was about 3.5-3.62%, which was higher than the target set <3.6% by the country (Department of Health, 2010). In 2011 the Ministry of Health announced a policy to prevent mother to child transmission in the form of guidelines for healthcare professionals across the country. These guidelines consist of the following; First, providing pre-counselling and post-counselling about the HIV test, including couple counselling and keeping the result strictly confidential. Second, pregnant women who have a positive HIV result will be treated with potent ART following the guidelines of the Ministry of Health. Third, infants born to mothers infected with HIV will receive

antiretroviral therapy and artificial formula milk for their babies who will also receive a blood test for HIV infection. Fourth, women, infants, husbands and partners who are HIV-infected will receive antiretroviral treatment according to their state of infection or symptoms or their CD4 count, as well as monitoring of their health and continuous follow-up (Anamai, 2012).

Currently, Thailand has 2 standard guidelines on antiretroviral therapy in pregnancy. One is the guideline of the Ministry of Health (Department of Health, Ministry of Public Health, 2007) and the other the reducing MTCT Project, run by the Thai Red Cross Society, supported by Her Royal Highness Princess Soamsawali (2005) (Thai Red Cross Society, 2012).

Realising the impact on children who were HIV-infected in the long run, Thailand has set clear MTCT guidelines for health service centres as follows:

- 1) All antenatal clinics must provide pre-counselling and post-counselling about the HIV test for pregnant women.
- 2) All pregnant women should be tested for HIV infection voluntarily.
- 3) All pregnant women who intend to carry their pregnancy to term will receive an AZT (Azidothymidine) regimen which is as follows:

- a. Start taking drugs at GA 28 weeks, AZT 300 mg. twice a day until the onset of ‘true¹⁰, labour pain.
 - b. In the true labour pain period, start NVP (Nevirapine) 200 mg.1 tab+ AZT 300 mg. 1 tab and then AZT 300 mg. 1 tab every 3 hour until delivery.
- 4) All children born to mothers who are HIV-infected:
- a. Infant will be given 1 dose of NVP syrup 6 ml. immediately after birth (If the infant has a birth weight lower than 2,500 gm, they should be given the NVP syrup in the following dose; 2 mg/ kg. body weight)
 - b. For infants born to mothers taking ART during pregnancy for 4 weeks and above, these babies will be given AZT syrup at 2 mg/ kg body weight after birth immediately and then the every 6 hours for 7 days.
 - c. For infant born to mothers taking ART during pregnancy for shorter than 4 weeks, these infants will be given AZT syrup at 2 mg/kg body weight immediately after birth and then every 6 hours for 6 weeks.

¹⁰ True labour pain: Feeling pain or uncomfortable due to uterine contraction. Contractions come continuously at regular interval (30-70 minutes), despite moving or changing position, contractions get closer together at time goes on, it means “a baby is ready to come out ”

- 5) Infants born to mothers infected with HIV have to be tested for immunity to HIV infection at age 12 months and if the results show HIV positive antibodies, this is to be repeated to confirm the diagnosis at 18 months.
- 6) Infants born to mothers infected with HIV will receive antiretroviral therapy and artificial formula milk for their babies for 21 months.
- 7) For women after childbirth and their husbands/partners (In cases of women willing to disclose their HIV status to their husbands/partners¹¹) they will receive proper health care and antiretroviral drugs if indicated.
- 8) For children who are found to be HIV-infected, they will receive appropriate care and be treated with antiretroviral drugs.

(Source: Department of Health (2007), these are the original guidelines).

2.9 Conclusion

Chapter 2 has presented the background information to this study in 7 main sections: first, the current situation of the AIDS epidemic, second, AIDS and Retroviral Therapy (ART), third, AIDS related stigma and discrimination, fourth, human and sexual rights, fifth, women's rights, health, sexual health and their reproductive health, sixth, gender and HIV, and finally it has provided information about Thailand, the healthcare system

¹¹ In cases of women willing to disclose their HIV status to their husbands/partners: There is no law in Thailand which obliges an individual to reveal their HIV positive status to sexual partner

in Thailand and HIV in Thailand. The chapter has shown that globally AIDS is a significant health issue with 76.1 million persons currently infected with the disease globally, of which 35 million have died (UNAIDS, 2017a). Although nowadays, with the development of AIDS treatments, especially ART which improves the lives and health of people who are living with AIDS better than ever before, stigma and discrimination related to AIDS has not decreased as much as would have been expected. AIDS related stigma and discrimination exists within HIV infected persons themselves, in communities, countries and worldwide. The WHO cites fear of stigma and discrimination as the main reason why people are reluctant to get tested, disclose their HIV status and take antiretroviral drugs (AIDS Education & Research Trust, 2014a). To reduce the level of stigma and discrimination in local and international societies, people need to understand and respect others human and sexual rights and these must also be supported by governments and international organisations.

In Thailand, AIDS is one of the top 10 causes of death contributing to physical disability and mental health problems in Thai people of both sexes. The number of people living with HIV/AIDS during the period 1984-2016 has increased to more than 1.5 million (Ministry of Public Health, 2016). The most infected groups are those of working reproductive age (20 to 39 years old). The main reason for the spread of HIV/AIDS was, and remains, through sexual intercourse and the high risk groups are female sex workers or prostitutes, homosexual men, injecting drug users and migrants (Bureau of Policy and Strategy, Ministry of Public Health, 2015; 2016). People who are

living with AIDS still face prejudice, blame and other negative attitudes from Thai-society.

The needs and choices of HIV/AIDS women in their reproductive years have changed in recent decades. Making a decision to be pregnant in women who living with is an unavoidable situation which public health providers must respond to by providing healthcare services, manage risk, and importantly respect the decisions made by these women to become pregnant. The challenge in taking care of reproductive-age women who are infected with HIV, despite the current efficiency of treatment, is managing the more complex problems like women who living with HIV becoming pregnant, their rights and choices, and addressing the associated stigma.

The next chapter is a review of the relevant literature.

Chapter 3

Literature review

This chapter is a systematic review of the literature on HIV positive women's decision making processes regarding their reproductive health and reproductive choices. Specifically, the review set out to answer the following question: "*What factors affect HIV positive women's decision to become pregnant?*" The chapter begins by setting out the method used to search and critically appraise the literature. It then presents the findings from the review under 9 main themes. The chapter concludes by identifying the gaps in the current knowledge base on the reasons why HIV positive women become pregnant and it sets out the research question and objectives of the thesis.

3.1 Search terms and databases

Then the key search terms were created around the review question and these were searched in electronic databases such as Summon™, MEDLINE/PubMed, CINAHL (The Cumulative Index to Nursing and Allied Health Literature), ScienceDirect and PsycINFO. Details of these keywords and databases are described in **tables 3.1-3.3**.

Summon™ was suggested by the Hull University Library Services to search across the majority of the library's electronic resources; this resource covers journal articles, electronic books, and web resources. This database also has records from other publishers, government agencies, database providers, and the numerous other libraries that participate in Summon (University of Hull, 2014; Virginia Tech, 2015).

Table 3.1: Data bases

Summon
MEDLINE/PubMed
CINAHL
ScienceDirect
PsycINFO

Table 3.2: Search terms

HIV positive AND pregnan*
HIV positive women and decision and pregnant
“ Why HIV positive women want to be pregnant”
“pregnancy experience and HIV positive women”
“infected women and pregnancy and needs”
“HIV infected women” and “pregnancy” and “needs”
“HIV positive women” and “pregnancy decision”
“HIV positive women” and “pregnancy” and “decision-making”
“HIV positive women” and “pregnancy decision” and “adolescent”
“HIV positive women” and “pregnancy” and “reproductive choice”
“HIV positive women” and “pregnancy” and “family support”

Table 3.3: Number of records identified through database searching

Database	Search terms	Search date	Initial results	# Selected in first screening
Summon	HIV positive AND pregnan*	7/3/15	398	4
	“HIV positive women” and “pregnancy decision”	7/3/15	68	16
	“HIV positive women” and “pregnancy decision” and “adolescent”	7/3/15	23	3
	“HIV positive women” and “pregnancy” and “reproductive choice”	7/3/15	82	15
	“HIV positive women” and “pregnancy” and “family support”	7/3/15	55	5
				626
MEDLINE /PubMed	HIV positive and pregnant	16/1/15	381	38
	“HIV infected women and pregnancy and needs”	16/1/15	28	10
	“pregnancy experience and HIV positive women”	16/1/15	20	1
	“HIV positive women” and “pregnancy decision”	16/1/15	2	2
	“HIV positive women” and “pregnancy decision” and “adolescent”	16/1/15	1	1
	“HIV positive women” and “pregnancy” and “reproductive choice”	16/1/15	5	4
	“HIV positive women” and “pregnancy” and “family support”	16/1/15	2	0
				775

Database	Search terms	Search date	Initial results	# Selected in first screening
CINAHL	HIV positive and pregnancy	18/2/15	41	12
	HIV positive and pregnant	18/2/15	21	9
	“HIV infected women” and “pregnancy” and “needs”	18/2/15	3	1
			65	22
ScienceDirect	“HIV positive women” and “pregnancy” and “decision-making”	18/2/15	8	7
	“HIV positive women” and “pregnancy” and “reproductive choice”	18/2/15	34	20
	“Why HIV positive women want to be pregnant”	7/1/15	55	7
			97	34
PsycINFO	HIV positive women and decision and pregnant	12/5/15	22	5
	Total		1,585	160

3.2 Selecting criteria

3.2.1 First screening

The criteria used for first screening of the initial 1,585 database results down to 160 is set out in **table 3.4**.

Table 3.4: First screening

Relevance detected	By title then abstract
Publication status	Full text or abstract online Articles from peer-reviewed publications
Language	English language
Time frame	2005-2015

3.2.2 Second screening

The second screening step involved applying the inclusion and exclusion criteria to select the eligible papers for review from the 160 papers. This process is described below.

3.2.3 Inclusion and exclusion criteria

3.2.3.1 Inclusion criteria:

The criteria for considering studies for this review drew on **PEO** (**P**articipants, **E**xposures, **O**utcomes) which is commonly used in qualitative research/search questions (Khan et al., 2003; Bettany-Saltikov, 2012; University Campus Suffolk, no date). In this review PEO is applied to the review question “*What factors affect decision to become pregnant in women who living with HIV?*” as follows: **see table 3.5.**

Table 3.5: Second screening; PEO review question

Participants	HIV positive pregnant women, HIV positive women, HIV positive women in the reproductive years
Exposures	HIV positive
Outcomes	Desire for pregnancy, pregnancy experiences, decision-making to become pregnant, desire to have a child, motherhood experiences, reproductive choice, reproductive health, reproductive rights, reproductive needs and family support.

This review included the following specified additional criteria described in **table 3.6** below.

Table 3.6: Specified additional criteria

Relevance detected	Full text only
Time frame	2005-2015
Publication status	Full text available online Articles from peer-reviewed publications
Language	English language
Study's design target	Qualitative research, Quantitative research (Non-RCTs), Mixed method, Systematic reviews and Literature reviews.

3.2.3.2 Exclusion criteria:

A study was excluded from the review and analysis if it did not meet at least one of the following:

1. Participants and research design not meeting the inclusion criteria.
2. Outcomes not meeting the criteria set for this review (PEO and Specified additional criteria as described in **tables 3.5 and 3.6** above).

For the second screening, 81 papers were selected for review in full because these met the inclusion criteria and specified additional criteria as described. There were 79 excluded papers. The process of selecting the literature is described in the diagram below.

3.3 Method of searching and selecting evidence

PRISMA Diagram demonstrating the literature selection process (PRISMA, 2009):

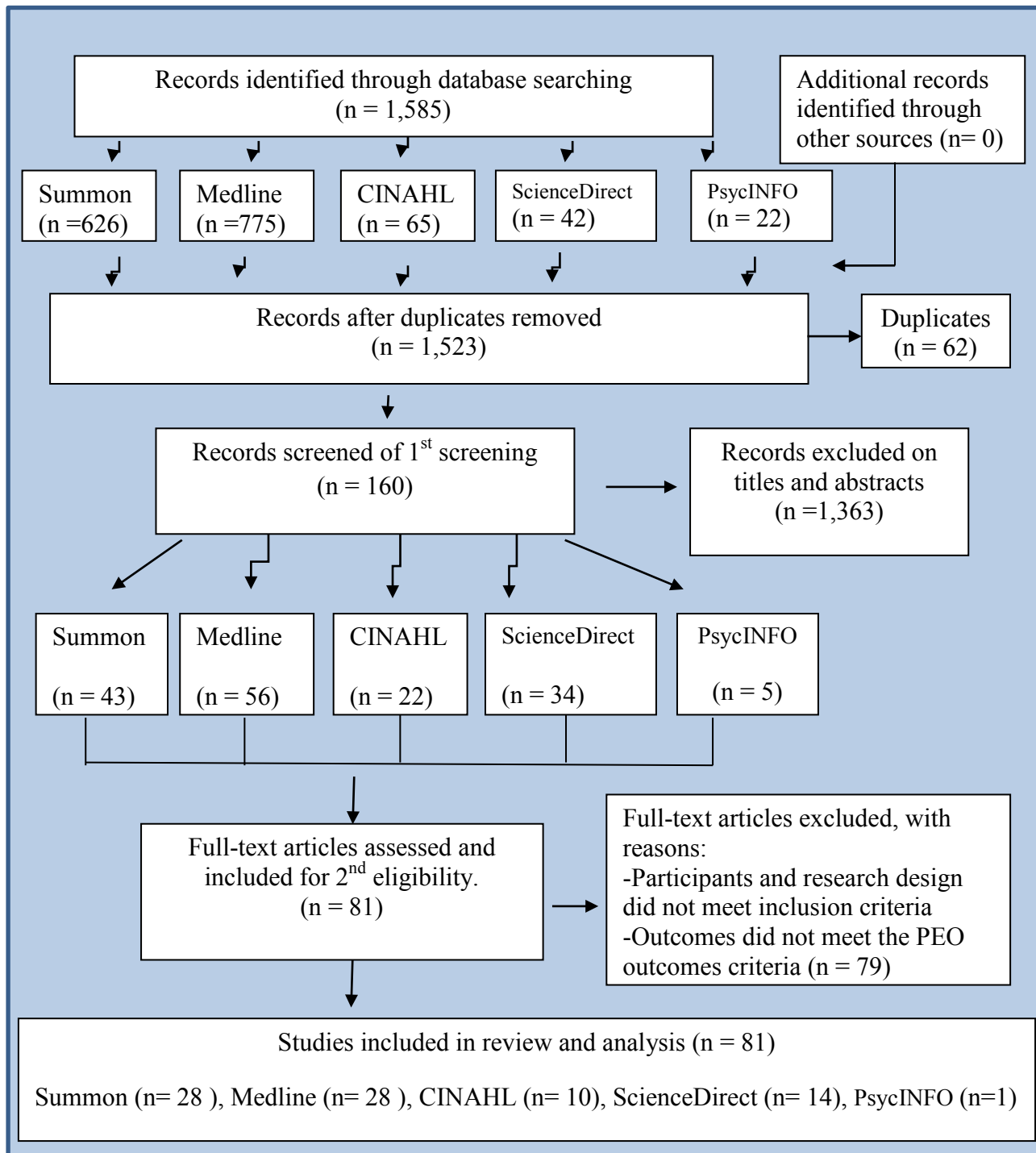


Figure 3.1: Selecting flow diagram (PRISMA, 2009)

3.4 Critical appraisal framework to analyse eligible studies

The 81 eligible studies were analysed and evaluated in full by using the following critical appraisal frameworks:

- Qualitative and Mixed method research were analysed and evaluated using the Critical Appraisal Skills Programme (2013) checklists.
- Quantitative studies were analysed and evaluated using Downs and Black's checklists (Downs & Black, 1998) for non-randomised studies.
- Systematic reviews and literature reviews were analysed and evaluated using the 10 question PRISMA (2009) checklists.

(For evidence of the analysis of the 81 papers see **appendix H**)

3.5 Findings

The results from 81 eligible studies were reviewed and analysed in themes. Each theme derives from primary coding where groups of similar data or variables are combined. The review emphasises the 10 most recent years of research on women who living with HIV related to the context of pregnancy and their reproductive choices. It also includes other factors like family, community and health services which influence women's reproductive choices. The review findings are divided into 9 themes: 1) Pregnancy experiences in women who living with HIV; 2) Decision making process and the reasons to have a child; 3) Factors influencing pregnancy desire; 4) Stigma and discrimination; 5) The effects of AIDS on HIV positive pregnant women's health; 6)

Interaction with health care providers and services; 7) Family planning; 8) Disclosure of HIV and, 9) Family support. Each of these themes will now be discussed in turn.

3.5.1 Theme 1: Pregnancy experiences in women who living with HIV

This theme describes the lived experience of pregnancy as perceived by HIV positive women. Sanders (2008) reported that all the HIV positive women in their study had experienced emotional distress since hearing their positive diagnosis and some women had experienced long term emotional effects. Women related how they had been stigmatised in health care settings, which lead to very negative feelings. With respect to the relationship between emotions, pregnancy and the baby, Sanders (2008) found that the women feared HIV transmission to the baby and they worried about the effects of ARV and of pregnancy on their health.

Liamputtong and Haritavorn (2014), in a study about the experience of pregnancy and motherhood in women who living with HIV, found that Thai pregnant women, living with HIV/AIDS, experienced shock and fear about their HIV positive status. Many women did not wish to keep their pregnancy and they wanted to abort, but were prevented from doing so because of high gestational age (GA) and religious beliefs. Some women changed their minds about having an abortion because of positive family support. As mothers they had ongoing multiple anxieties and worried about their own and the baby's health and that the baby would have HIV. The women tried to remain positive and to live for their children.

Ross et al. (2007) studied the lived experiences of newly diagnosed HIV positive pregnant women in Thailand. Their findings are similar to previous studies conducted across other groups of women who living with HIV about the issue of a “struggle”. Thai pregnant women in this study perceived their life experience as a struggle, both after becoming HIV infected and during pregnancy. The struggle included; “struggling alone”, because most women kept their HIV positive status from others and they felt overwhelmed and alone; “sharing one’s struggling”, after suffering from struggling alone some women decided to share their struggle with others such as a partner and/or family member; “struggling for the baby”, most women continued to struggle for the sake for their babies, a baby was their hope and reason for living; and, “struggling through ups and downs”, women felt sometimes content but sometime they felt helpless.

3.5.2 Theme 2: Decision making process and the reasons to have a child

This theme presents findings from all the included studies which addressed the issues of decision making and the reasons underpinning the desire to have a child in women who living with HIV. International studies from a number of countries on women’s reproductive intentions indicate that 40-64% of women who living with HIV desire to have a child (Cooper et al., 2007; Nobrega et al., 2007; Gogna et al., 2009; Marcellin et al., 2010; Loutfy et al., 2012; Huntington et al., 2013; Hernando et al., 2014). Additionally, other studies conducted in the US and Canada show that the number of women who living with HIV becoming pregnant increased from 41% between 2004 and

2005, to 57.5%) between 2006 and 2009 (Loutfy et al., 2009; Firth et al., 2012). This is also true in the UK where the pregnancy rate in women who living with HIV has risen (Huntington et al., 2013).

There were two international studies and one Thai study found on the decision making process to have a child among women who living with HIV. Internationally, Barnes and Murphy (2009) studied reproductive decision making in 80 women who living with HIV of childbearing age in the US. This study found that more than half of pregnant women kept their pregnancy instead of having an abortion. Those women made their reproductive decision based on their judgment of the positive perception of motherhood versus the negative pressure of social opinion and they weighed their decision between “forces against choosing pregnancy and reasons for choosing pregnancy”.

Chi et al. (2011) studied pregnancy decision-making among 20 women who living with HIV in Vietnam. The study found that 13 out of 20 women decided to have an abortion and 7 women kept their pregnancies. When making the decision to have a child, some women made their own decisions while other complied with the wishes of others; most often their husbands, relatives and health care providers.

In the Thai study, Youngwanichsetha et al. (2010) explored the decision making processes in 38 Thai HIV positive pregnant women to either keep or terminate their pregnancies. They propose a model of decision making from their findings; the core category being “*Weighing stress*”, which involved the examination and weighing up of options regarding keeping or terminating the pregnancy. Their results are divided into 3

sub-categories; “Being ambivalent about continuing a pregnancy and considering an abortion”, women were concerned about mother to child transmission; “Exploring alternative options” such as seeking information, services and emotional support, discussing concerns and decisions with health providers, husbands and family members, seeking an abortion, considering the use of ART and offering the child for adoption, and; “Selecting the appropriate choice”, appraising the influencing factors, deciding between continuing the pregnancy and terminating the pregnancy, and adapting to their decision.

With respect to the reasons for having children, women living with HIV had many reasons. For example, women believed that using ART/PMTCT would prevent HIV infection in the baby, they trusted in the efficacy of PMTCT and ART, and this supported their desire to have a child (Demissie et al., 2014). Barnes and Murphy (2009) found that women's decisions to have a child were based on their judgment of the positive aspects of motherhood versus the often negative pressures of social and public opinion. Kisakye et al. (2010) found that women made their pregnancy decisions based on wanting a child and the importance of having a child. Other persons were involved in women's decisions such as the women's husband, parents, siblings and in-laws (Oosterhoff et al., 2008; Beyeza-Kashesya et al., 2010; Chi et al., 2011). In addition, Hernando et al. (2014) found that women wanting to form a family are the reasons they want to have children Cooper et al. (2007), by contrast, found that the important factors influencing a decision to not have a child are concern about infecting a partner and infant, having a previously infected baby, and perception of community

disapproval of reproduction with HIV positive status. Carter and Kraft's (2013) review of the literature on reproductive health behaviours in HIV positive adolescent and young women in the US found that with respect to pregnancy intention that these women hoped to have children in the future, but many wanted to avoid pregnancy until later. In addition, regarding women's reproductive decision making, Gruskin (2012) summarised papers from a range of relevant disciplinary perspectives and found that contraception, safe pregnancy, delivery and breast feeding, and safe abortion, emerged as common themes emerging across different disciplinary perspectives of pregnancy decision making in women who living with HIV.

Doull et al. (2006) identified several gaps in the knowledge base about women's decision making in the context of pregnancy and HIV and these included: evidence around testing for one's status, advanced directives for self and child, the impact of disclosure, others perceptions of antiretroviral use and data on termination of pregnancies.

3.5.3 Theme 3: Factors influencing pregnancy desire

While theme 2 has presented the general findings on women's reproductive decision making and the reasons to have a child, theme 3 presents the specific findings on the factors influencing women's pregnancy and reproductive decisions.

The analysis identified 8 sub-themes under this theme including; women's desire for a child and characteristics of previous pregnancies and children, family desire, fear of

stigma and negative outcomes, age of women, marital status, HIV status and HIV disclosure, health status and sexual behaviour. These are first listed in **Table 3.7** below, and then discussed after this. Many of the studies are cross referenced across the different sub-themes.

Table 3.7: Factors influencing pregnancy desire

Variables or factors found	Key findings	Studies
1. Women desire for a child and characteristics of previous pregnancies and children	<ul style="list-style-type: none"> - Types of pregnancy - Death of a child, miscarriage, having no children - Wanting children with a current partner - Additional child related to child's gender issues 	(Suryavanshi et al., 2008; Kakaire et al., 2010; Kisakye et al., 2010; Kipp et al., 2011; Smee et al., 2011; Mmbaga et al., 2013; Demissie et al., 2014; Hernando et al., 2014)
2. Family members' desire for a child	<ul style="list-style-type: none"> - Partner's desire for a child - Other family members desire to have a child - The desire to have at least one male child by husband and family member(s) - Kinship 	(Nobrega et al., 2007; Oosterhoff et al., 2008; Suryavanshi et al., 2008)
3. Fear of stigma, anxiety and negative outcomes	<ul style="list-style-type: none"> - Perception of community disapproved of reproduction - Stigma by partners, families, communities and health care providers - Levels of anxiety about the future and available family support - Fear of children infection - Fear of partner infection - Having previous infected baby - Personal and social stigma and discrimination 	(Cooper et al., 2007; Kanniappan et al., 2008; MacCarthy et al., 2012; Demissie et al., 2014)

Variables or factors found	Key findings	Studies
4. Age of women	<ul style="list-style-type: none"> - Age (women under 30 had higher reproductive desire than those aged 30-39) - Age of women between 18-39 years is related to pregnancy desire 	(Loutfy et al., 2009; Beyeza-Kashesya et al., 2010; Kipp et al., 2011; Huntington et al., 2013; Demissie et al., 2014; Hernando et al., 2014)
5. Marital status	<ul style="list-style-type: none"> - Marital length - Level of sex relationship - Being single and being ever-married status was inversely associated with fertility intentions 	(Kakaire et al., 2010; Mmbaga et al., 2013; Demissie et al., 2014)
6. HIV status and HIV disclosure	<ul style="list-style-type: none"> - Being HIV positive status - Intention to have children in women who living with HIV - Duration of HIV diagnosis, disclosed HIV status and partner sero-difference - Time of disclosure and concealing of HIV status 	(Cooper et al., 2007; Nobrega et al., 2007; Ross et al., 2007; Sanders, 2008; Gogna et al., 2009; Minnie et al., 2009; Beyeza-Kashesya et al., 2010; Kisakye et al., 2010; Marcellin et al., 2010; Kaida et al., 2011; Loutfy et al., 2012; Huntington et al., 2013; Snow et al., 2013; Demissie et al., 2014; Hernando et al., 2014; Liamputtong & Haritavorn, 2014)
7. Health status	<ul style="list-style-type: none"> - Women's improved health status - Perceived good health status and CD4 count ≥ 200 - Having a good physical health-related quality of life 	(Kisakye et al., 2010; Marcellin et al., 2010; Mmbaga et al., 2013)
8. Sexual behaviour	<ul style="list-style-type: none"> - Increased rates of intercourse and unprotected sex - Decreased condom-unprotected sex, vigilant about condom use in beginning of relationship - Family planning method 	(Sanders, 2009; Kikuchi et al., 2011; Finger et al., 2012)

3.5.3.1 Sub-theme 1: Women's desire for a child and characteristics of previous pregnancies and children

This sub-theme included the studies that described or examined the women's characteristics of her previous pregnancies and children including preferences for a particular gender of child, the number of living children and hopes for more children. All of these are factors which influence desire to have a child in women who living with HIV. The details of the studies as described next.

Smee et al. (2011) examined the predictors of repeat pregnancy and found that factors associated with an increased likelihood of repeat pregnancy were death of a child, miscarriage and the number of additional children desired by a partner. Factors decreasing the likelihood of repeat pregnancy were associated with lower socioeconomic status, age and higher the Fertility Attitude Score (8-items of attitude toward fertility questions). Moreover, Hernando et al. (2014) found that reproductive desire was greater in women who had no previous children. Similarly, Demissie et al. (2014) found that women who had no biological living children and those who had only one child were associated with fertility desire.

Suryavanshi et al. (2008) studied the factors influencing repeat pregnancies in women with known HIV status in India. Their findings show that in an Indian context, there are two important factors known to influence reproductive decision making; firstly, family pressure, from the husband, but also from in-laws and other family members, and secondly, the desire to have at least one male child. Kipp et al. (2011), found that

statistically significant predictors for desiring more children were among other factors, having a higher number of living children and the desire for a male child.

Kisakye et al. (2010) found that women made pregnancy decisions based on the desire for a child of a different sex, prior child loss, prior abortions and other previous children born without infection.

Mmbaga et al. (2013) found that in relation to the characteristics of previous pregnancies and children the factors which increased the desire to have a child were having no children or having no more than one child. In contrast, Kakaire et al. (2010) found that the factors which reduced fertility desire were associated with having more than two children. Women who had previous children die were less likely to have fertility intentions.

3.5.3.2 Sub-theme 2: Family desire

This sub-theme presents the findings regarding the influence of family members on women's decisions to have a child. Family member's desire is one of the most important factors affecting decisions to have a child in women who living with HIV. Family members include husbands or partners, parents, relatives and other family members.

Nobrega et al. (2007) found that one of the variables independently associated with women's desire to have a child was a partner's desire for a child. Similarly, Oosterhoff et al. (2008) have also demonstrated that the family's role in decision making about

childbearing by women who living with HIV was important and affected to women's decisions to have a child. In addition to their findings on the importance of having a male child in influencing repeat pregnancy in HIV positive Indian women, Suryavanshi et al. (2008) also found that family pressure to have a child, from the husband, but also from in-laws and other family members influenced reproductive decision making.

3.5.3.3 Sub-theme 3: Fear of stigma, anxiety and negative outcomes with regard to partner and baby

This sub-theme presents findings from those studies which examined the influence of stigma, anxiety and negative outcomes on women's decision making and their experiences of being pregnant. One of the important factors influencing women to consider having a child is a perception of community disapproval of reproduction with HIV positive status (Cooper et al., 2007; Demissie et al., 2014).

MacCarthy et al. (2012) summarised that stigma has been shown in different ways in different contexts for example, fear of stigma from partners, families, communities and health care providers intensified women concealing their HIV status and reluctance to discuss their desire to have a child with these people. Moreover, stigma displayed by partner, family members, community and health care providers affected the desire of women who living with HIV to become pregnant.

Kanniappan et al. (2008) found the main factors distinguishing women who wanted to have a child and those who did not were their levels of anxiety about the future and available family support. Women who did not have family support and were stigmatised by their family members were reluctant to carry pregnancy as they were not sure of the future including having nobody to care for the child in the event of the woman's death.

Fear of negative outcomes is related to fear of infecting children and partner. Cooper et al. (2007) claim that the important factors negatively influencing a woman to consider having a child were fear of infecting a partner and infant.

3.5.3.4 Sub-theme 4: Age of women

This sub-theme shows the relationship of the age of women who living with HIV and fertility decisions. The relevant included studies show that younger women who living with HIV had a greater desire to have a child than older women (Loutfy et al., 2009; Beyeza-Kashesya et al., 2010; Kipp et al., 2011; Huntington et al., 2013; Demissie et al., 2014; Hernando et al., 2014).

Huntington et al. (2013) found that older women who living with HIV, with a CD4 cell count less than 200cells/ μ l and women of white ethnicity, were less likely to have a pregnancy. This was confirmed by Hernando et al. (2014) who report that reproductive desire was found in 49% of women and was associated with age, in that women under 30 had higher reproductive desire than those aged 30-39. Kipp et al.

(2011) discussed previously, found statistically significant predictors for desiring more children were younger age, having a higher number of living children and a desire for a male sex child. Demissie et al. (2014) found that one of the factors associated with fertility desire was the age of women between 18-39 years. Beyeza-Kashesya et al. (2010) found that among couples in which the woman was HIV positive, that young age was significantly associated with increased fertility desire. In addition, Loutfy et al. (2009) studied the fertility desire and intentions of 490 HIV positive in Toronto, Canada and found that 69% desired to give birth and 57% intended to give birth in the future. The significant predictors of fertility intentions were: younger age (age<40) ($p<0.0001$), African ethnicity ($p<0.0001$), living in area of Toronto ($p = 0.002$), and a lower number of lifetime births.

3.5.3.5 Sub-theme 5: Marital status

This sub-theme indicates the relationship between marital status of women who living with HIV and their partner. Kakaire et al. (2010) found that one of the factors which reduced fertility desire was being divorced or separated. Also, with respect to marital status, Demissie et al. (2014) found one of the many factors associated with fertility desire was marital length (≤ 4 years, within 5-9 years and 10-14 years more likely to have fertility desire as compared to the couples who had more than 15 years marital length). Other factors identified in Demissie et al. (2014) study were shown in earlier sections such as age, characteristics of the pregnancy, HIV status of partner and HIV disclosure. Mmbaga et al. (2013) found that marital status and relationship with a

partner increased the desire to have a child and included such factors as, having sex with a partner, living with partner, and disclosure of HIV status to a partner.

3.5.3.6 Sub-theme 6: HIV status and HIV disclosure

This sub-theme identifies how HIV positive status and HIV disclosure to others influences women's fertility decisions. HIV counselling and screening are considered a part of routine services for pregnant women at ANC, advice is given at this service on how to prevent HIV transmission to their babies and sex partners (Minnie et al., 2009).

A number of studies found that the majority of pregnant women discovered they were HIV positive during routine services at ANC (Cooper et al., 2007; Nobrega et al., 2007; Ross et al., 2007; Sanders, 2008; Gogna et al., 2009; Marcellin et al., 2010; Loutfy et al., 2012; Huntington et al., 2013; Hernando et al., 2014; Liamputtong & Haritavorn, 2014). These studies show both intention and non-intention to have a child among women who living with HIV. Some studies found women who living with HIV with lower pregnancy intention than HIV negative women with HIV positive women being 60% less likely to report child bearing intention (Kaida et al., 2011; Snow et al., 2013). However, many women who living with HIV reported intention to have a child in other studies. For example, Kaida et al. (2011) found that 44% of women in their study reported intent to have children with HIV positive status ($P < .001$). Beyeza-Kashesya et al. (2010) found that among couples where the woman was HIV positive,

of young age and with relatives' expectations for children, these factors were significantly associated with increased fertility desire.

In addition, HIV positive status and women's HIV disclosure to partner or family members is related to pregnancy decisions. Kisakye et al. (2010) found awareness and belief in disclosure of HIV status, awareness of spouse's HIV status, availability of antiretroviral therapy, stigma of HIV and childlessness, influence of partners and family members, and the impact of the health of self and family members were all factors that motivate women who living with HIV to conceive or influence pregnancy decisions, in spite of being HIV positive. Moreover, Demissie et al. (2014) found that duration of HIV diagnosis, disclosed HIV status and partner HIV status-difference were some of the factors significantly associated with fertility desire.

3.5.3.7 Sub-theme 7: Health status

There is an association between women's health status and pregnancy desire. This sub-theme presents findings from studies which have examined this issue. Kisakye et al. (2010) found that when women had improved health, they were more motivated to have a child. Similarly Mmbaga et al. (2013) found that perceived good health status and CD4 count ≥ 200 cells/mm³ was associated with increased fertility and the desire to have a child. Marcellin et al. (2010) found that after adjusting for age, matrimonial status, the number of biological children and sexual activity, the main factors independently associated with this desire in a multivariate analysis were having a good

physical health-related quality of life and a CD4 count at ART initiation <200 cells/mm³.

3.5.3.8 Sub-theme 8: Sexual behaviour

This sub-theme is about sexual behaviour among women who living with HIV and their partners and is the last factor examined from the literature regarding pregnancy decisions. Finger et al. (2012) found that Desire For Pregnancy (DFP) was associated with sexual behaviours that may place young women at risk for sexual transmission infection (STI) and HIV transmission to partners. These authors found that DFP in 130 young women who living with HIV was associated with increased rates of intercourse, decreased condom use, increased partner concurrency, increased rates of unprotected sex with a non-concordant partner, and a higher number of previous STIs. In addition, DFP was associated with increased likelihood of recent intercourse, condom-unprotected sex, and oral sex.

Kikuchi et al. (2011) investigated factors associated with unintended pregnancies after knowing sero-positive status and also factors associated with the non-use of contraceptives among women who living with HIV taking ART. These authors found that among the 565 participants, 263 had engaged in sexual intercourse during the last three months. Of these, 85 women had not used any contraception.

Further, Sanders (2009) found that in regard to sexual behaviours in 9 pregnant-women who had become mothers post-diagnosis, some of them were vigilant about

condom use at the beginning of relationship. Then women reported that as time passes, more risks were taken and consistent condom use decreased.

3.5.4 Theme 4: Stigma and discrimination

This theme shows the effects of stigma and discrimination which women who living with HIV faced in different contexts.

Pregnant women who living with HIV perceived discrimination from family, the community and health care providers (Brickley et al., 2009). In relation to the health care sector, Paxton et al. (2005) studied 764 women living with HIV/AIDS in 4 countries in Asia. They found that 54% of their sample experienced some form of discrimination within the health sector such as refusal of treatment (15%) or delay in the provision of health care (17%). Most of their sample did not receive pre-test counselling, only 38% in all countries received pre-test counselling. Breaches of confidentiality by health care workers were common and 34% of respondents said that somebody else had been told of their HIV status without their consent. One-third of the sample said they were advised not to have children after diagnosis.

Women were significantly more likely to experience discrimination than men in the family, community and workplace. Over half of the HIV-positive women interviewed postpartum in Cuca et al. (2012)'s study reported having experienced stigma, much of which was self-stigmatisation where women had negative self-judgement resulting in shame, worthlessness and blame because of being HIV positive. Women experienced

a range of types of stigma: verbal abuse (6.1%), healthcare neglect (7.9%), social isolation (4.9%) and workplace stigma (11.9%). Women also experienced minor depression, and those whose family knew of their HIV status had a significantly greater risk / incidence of experiencing stigma.

Nattabi et al. (2012) in a study of the HIV related stigma experiences of persons living with HIV in northern Uganda, identified 3 types of stigma; received, internal and associated stigma. Received stigma refers to behaviours targeted at participants and experienced by them or by others such as neglect, avoiding and abuse. Internal stigma refers to negative thoughts and behaviours from having a negative perception of themselves toward HIV. Associated stigma results from a person's association with someone living with HIV. These people continue to experience stigma in various forms, including internal stigma and verbal abuse from family, community members and health care providers, either directly or indirectly, and this experience of stigma enhanced or reduced their desire to have more children.

Kavanaugh et al. (2013) studied community attitudes towards childbearing and abortion among women who living with HIV in Africa where abortion is unacceptable. They found that women not only faced stigma from the community due to their HIV status, but also with respect to abortion. However, this study indicated that the community supported induced abortion among women who living with HIV when ART was unavailable.

A number of studies found that health care providers did not respect decisions to become pregnant made by women who living with HIV (Sanders, 2008; Gogna et al., 2009; MacCarthy et al., 2012). Women who were older, had less education, whose husbands had other wives, and who perceived community discrimination against people with HIV had significantly greater anticipation of HIV stigma (Cuca et al., 2012). Women who anticipated HIV-related stigma from their male partner had lower positive attitudes about giving birth at the health facility. Less positive attitudes about a health facility birth were strongly related to women's intention to give birth outside of a health facility (Medema-Wijnveen et al., 2012).

In contrast, a few studies claimed that some participants have positive attitudes to health care services regarding HIV positive status. For example Hanh et al. (2009) examined the role of health staff in supporting HIV-infected pregnant women, and found that most women believed they were being supported by health care providers. Similarly, Hardon et al. (2012) found that the large majority of HIV positive pregnant women (85%) in Africa felt that the health workers and counselors respected their desire for confidentiality by protecting their HIV results.

3.5.5 Theme 5: The effects of HIV/AIDS on health of women who living with HIV.

These effects relate to mental and physical health among women who living with HIV in pregnancy.

In relation to the effect of AIDS on women's mental health, Ross et al. (2009) examined the predictors of depressive symptoms among HIV positive pregnant women in Thailand. These authors found that self-esteem, emotional support and financial support were negatively correlated with depressive symptoms. Kotze et al. (2013) in a study aimed at identifying the coping strategies used by women who living with HIV in pregnancy, identified 2 coping styles; active and avoidant. Increases in active coping were associated with decreasing levels of internalized stigma and depression, increasing self-esteem and positive social support, knowing someone else with HIV, being healthy and living with sufficient financial resources. In contrast, increases in avoidant coping were associated with increasing internalised stigma and depression, this style was also associated with lower levels of self-esteem, HIV-knowledge and lower levels of education.

Studies which examined the effect of HIV/AIDS on women's physical health of women who living with HIV, compared with HIV negative women, found that the mortality and morbidity rate were increased for women who living with HIV during the year of pregnancy, delivery and in the post-partum period (Chersich et al., 2008; Zaba et al., 2013), and physical symptoms on HIV positive women's physical health relates to somatic of anxiety such as abdominal discomfort, inability to relax and insomnia and other symptoms such as fever, dyspnea and dysuria (Chersich et al., 2008). Moreover, Ross et al. (2009) found that physical symptoms were positively correlated with depressive symptoms.

3.5.6 Theme 6: Interaction with Health care providers/ health care services

Women experienced both encouraging and obstructive services with their HIV positive status regarding their desire to have a child. This theme presents the women's experiences with these health care providers and services.

The study by Cooper et al. (2007) found that most of their participants had not discussed their reproductive desire and intentions with health care providers because they were anxious that they might face judgmental attitudes regarding their reproductive options. Similarly Finocchiaro-Kassler et al. (2010) found that just 31% of women who living with HIV of reproductive age discussed future childbearing plans with their provider.

Women who do want to discuss their reproductive choices expressed their wish to participate with obstetrics staff such as physicians and midwives or nurses (Zhang et al., 2012). In this study 50% of participants, wanted to speak to an obstetrician/gynaecologist regarding pregnancy planning, and 74% regarded physicians as a main source of fertility service information. While the majority of participants in this cohort desire access to ART information, most do not perceive these services as readily accessible (Zhang et al, 2012). Tyer-Viola (2007) found that obstetric nurses had more positive attitudes to HIV positive pregnant women in term of respect for the women's role as mother than sympathy-rights attitudes concerning HIV testing and treatment. Nurses were significantly more prejudiced and less willing to care for women who were HIV positive than those who were not. While Viana et al.

(2013) found the role of nurses in the patient's view was confused with other nursing professionals and sometimes women resented not receiving more specialised nursing care. This view is supported by the study conducted by Kelly et al. (2013) who found that the key positive staff attributes that facilitated a positive patient experience were knowledge and experience, empathy, and understanding of their unique needs and continuity of care. A negative experience was attributed to lack of communication, lack of knowledge and experience.

Notably, Gogna et al. (2009) mention that physicians had a lack of updated information about the interaction between ARV drugs and hormonal contraception in order to advise women who living with HIV. Thurling and Harris (2012) found that lay counsellors need supervision and mentorship for the work environment and that their training needs to be adapted to meet the extended roles that they are playing in PMTCT.

Moodley et al. (2014) interviewed 28 health care providers and found that providers recognised the sexual and reproductive rights of HIV positive individuals, but struggled with the tension between supporting these rights and concerns about spreading infection. They also had limited knowledge of safer conception methods and this constrained their ability to advise and support clients in realizing fertility desires.

Ferguson et al. (2014) examined the factors associated with registration at ANC clinic within 90 days of HIV diagnosis were: having cared for someone with HIV, not having to pay for transport to the hospital, and having received enough information to

decide to have an HIV test. Qualitative data revealed multiple factors underlying high patient drop-out related to women's social support networks (partner's attitude to HIV status), interactions with health workers (being given unclear/incorrect HIV-related information) and health services characteristics (restricted opening hours, long waiting times).

Moreover, Hanh et al. (2009) examined the role of health staff in supporting HIV-infected pregnant women and found that overall the women believed they were being supported by health staff. With respect to post-test counselling, women received both emotional support and help to make hard decisions regarding whether or not to maintain their pregnancies.

Hardon et al. (2012)'s study on the quality of information provision and counselling, the patterns of HIV disclosure and how health services could be improved found that the majority of HIV positive pregnant women (84%) were attending antenatal care (80-90%), they were given explanations about the meaning of the tests performed, how HIV can be transmitted, given advice on prevention, encouraged to refer their partners for testing, and given time to ask questions. Of these women who living with HIV, 79% reported that they generally keep their status secret; only 37% had disclosed to their partner, the large majority (85%) felt that the health workers and counselors respected their desire for confidentiality by protecting their results.

MTCT and PMTCT service

This sub-theme of theme 6 is given particular attention because MTCT and PMTCT services are the heart of services to reduce the transmission of HIV from mother to child during pregnancy. Moreover, these women interact with health care providers when they receive this service.

Health care providers appear to play an important role in reproductive health services for women who living with HIV (Giles et al., 2009). The MTCT-Plus programme emphasises access to family planning, early treatment of STIs, cervical cancer screening, safe abortion, safe pregnancy, PMTCT and their positive children, including engaging men and women in services together (Myer et al., 2005). Darak et al. (2012) conducted a systematic review on PMTCT in India (N = 134). They found that the 20 papers studied on experiences of implementing a PMTCT program show high drop-out rates of women, particularly prior to receiving ARV. Studies on individual components of the 26 studies show that HIV counselling and testing is acceptable and feasible. Other components of the services were; pregnant women's access to ANC care, HIV positive women's immunological assessment using CD4 testing, repeat HIV testing among pregnant women, early infant diagnosis and factors related to linking women who living with HIV and children to postnatal care is lacking.

Rujumba et al. (2013) found that prior to attending their current ANC visit, most women knew that the hospital provided HIV counselling and testing services as part of

antenatal care (ANC). HIV testing was perceived as compulsory for all women attending ANC at the hospital but beneficial for mothers, especially those who test HIV positive and their unborn babies. Most women who living with HIV were satisfied with the immediate counselling they received from health workers, but identified the need to provide follow up counselling and support after the test, as areas for improvement. There were significantly more preterm births among women who living with HIV ($p=0.01$) and women who received HAART were no more at risk of preterm deliveries as compared to women who received dual ART. HIV exposed infants confirmed HIV infected at birth numbered 9. The in-utero transmission rate was highest among women who required HAART but did not initiate treatment (8.5%) compared to 2.7% and 0.4% among women who received HAART and women who were not eligible for HAART and received PMTCT prophylaxis (Hussain et al., 2011).

Thurling and Harris (2012)'s study suggested a need for supervision and mentorship of counsellors in the working environment. The training of lay counsellors needed to be adapted to meet the extended roles they are playing in PMTCT.

The results from a systematic review by Gay et al. (2011) found a range of successful and promising interventions to improve the sexual and reproductive health in HIV services and these include; early postpartum visits and providing family planning, providing youth-friendly services, supporting information and skills, supporting disclosure, providing cervical cancer screening and promoting condom use protection for pregnancy prevention and HIV transmission.

In addition, Kennedy et al. (2010) in a systematic review found evidence for interventions linking sexual reproductive health and HIV. The majority of included studies showed improvements in all outcome measures. Generally, positive effects were shown for key outcomes, including HIV incidence, sexually transmitted infection incidence, condom use, contraceptive use, uptake of HIV testing and quality of services. Promising practices (n = 23) tended to evaluate more recent and more comprehensive programmes. Factors promoting effective linkages included stakeholder involvement, capacity building, positive staff attitudes, non-stigmatizing services, and engagement of key populations.

3.5.7 Theme 7: Family planning in women who living with HIV

This theme presents findings on the use of hormonal and non-hormonal contraceptives in women who living with HIV and couples.

Condoms were commonly used among HIV-infected couples (Myer et al., 2007; Badell et al., 2012; Harrington et al., 2012; Carter & Kraft, 2013; Nakaie et al., 2014). However, some problems were found among the users of condoms as these were used inconsistently among HIV positive couples (Nakaie et al., 2014). When condoms were used inconsistently, the highest rates of unintended pregnancy were observed among these couples compared with the use of other contraceptive methods such as oral pills and injectable method (Kikuchi et al., 2011; Wall et al., 2013).

Other contraceptive methods commonly used include injectable hormonal methods and sterilisation (Badell et al., 2012; Harrington et al., 2012). The prevalence of sterilisation (13%) increased with age and not wanting to have a child (Myer et al., 2007). Ngure et al. (2012) studied pregnancy incidence according to contraceptive method and found that condoms being used as the primary contraceptive method marginally reduced pregnancy incidence among HIV positive couples. Compared with women using no contraceptive method, pregnancy incidence was significantly reduced among women who living with HIV using injectable contraception. Oral contraceptive pill users were more likely to become pregnant than injectable contraceptive users. There were no pregnancies among women using intrauterine devices (IUD), implantable methods or who had undergone surgical sterilisation.

McCall and Vicol (2011) claim that current evidence indicates that women living with HIV can have excellent outcomes from a combination of hormonal contraception and condoms. Although there are concerns about the effect of hormonal contraception on lipid levels, bone metabolism, and insulin and glucose regulation, hormonal contraceptives still present a highly desirable option for many women, and IUDs seem to be an optimal choice for contraception. This finding was supported by a study from Stringer and Giganti (2009) who compared the incidence of HIV disease progression among antiretroviral therapy in women with and without exposure to hormonal contraception in 4,109 women in 13 sites in the Africa and Asia regions. They found no negative outcomes in terms of HIV disease progression among women using hormonal contraception. Monitoring using contraceptive method as a time varying

exposure did not change this negative finding, this provides some reassurance that hormonal contraception is not associated with HIV disease progression.

However, in the practice setting, the oral hormone pill and the IUD were not used as much as experts suggest. Counsellors and practitioners seem to be fearful of uncertain drug interactions and the inflammation of IUD use in people living with HIV who have low immunity. Most physicians encourage only condom use while a minority refer patients to other family planning methods (Gogna et al., 2009). Chi et al. (2012) studied the use of contraception before and after HIV diagnosis and consultation. Of the 351 participants in their study, 63% stated they had used contraception before HIV diagnosis and 89% stated they had used contraception after HIV diagnosis. Further, 46% of the women had been using either the pill or IUD before the diagnosis whereas the same applied for only 8% of the women after diagnosis. With respect to condom use; 39% stated they had been using a condom before HIV diagnosis whereas 87% stated condom use after HIV diagnosis. A study by King et al. (2011) found that most women reported family planning experiences with condoms and hormonal injections only and also that men had limited family planning information apart from condoms.

Akelo et al. (2013) looked at the factors associated with the use of family planning and found the following positive associated intentions: marital status ($p=0.04$), having talked to their spouse or partner about family planning ($p<0.001$), perceived spouse or partner approval of family planning ($p<0.001$), previous use of a family planning

method ($p=0.006$), attitude toward the current pregnancy ($p=0.02$), disclosure of a sexually transmitted infection (STI) diagnosis ($p=0.03$) and ethnic group ($p=0.03$).

Myer et al. (2005) systematic review of the efficacy of integrating reproductive health services with MTCT programmes found that it increased access to contraception and condom use and consequently secondary prevention of HIV. Additionally, integrating the two services promoted engagement with the programme by both men and women.

3.5.8 Theme 8: Disclosure of HIV status

The decision to disclose or not to others about HIV status in women living with HIV was often related to the perceived level of stigma and discrimination. Some women disclosed their HIV status to their family members while many of those had not, the results are mixed as indicated below.

Hernando et al. (2014) found that 87% of respondents in their study had disclosed their sero-status to their family circle, and 39% reported having experienced discrimination due to HIV infection. Most of the women living with HIV had not disclosed their HIV status to their sexual partners for fear of abandonment, violence and accusation of bringing HIV infection into the family. Most women living with HIV deferred disclosure and requested health workers' support in disclosure. Those who disclosed their positive status generally experienced positive responses from their partners (Rujumba et al., 2012).

In the adolescent group, disclosure was difficult for them and partners, and large proportions of HIV-infected youth had not disclosed their sero-status to recent partners (Carter & Kraft, 2013). However, Leonard et al. (2010) found that 18 of the 20 youth had disclosed their HIV status to another individual at least once, the reasons for disclosure were that they desired a closer relationship with someone and their post-disclosure relationship as more open than before. Half of them agreed that their supportive experiences encourage them to think about future disclosure.

Makin et al. (2008) found that 59% of their sample had disclosed to their partners and 42% to others. The factors associated with having disclosed to partners were identified as being married, prior discussion about testing, having a partner with tertiary education and less experience of violence. Better housing, less financial dependence on partners, and knowing someone with HIV were associated with disclosure to others. Increased levels of stigma at baseline decreased the likelihood of disclosure to partners post-enrolment, and increased levels of avoidant coping decreased subsequent disclosure to others. In contrast, Hardon et al. (2012) found that most of HIV positive pregnant women (79%) reported that these women generally keep their status secret, only 37% had disclosed to their partner.

Visser et al. (2008) found that women weighed fear of abandonment and discrimination against their desire to raise risk awareness and their need for support, partners most often responded to women's disclosure with disbelief and shock, whereas parents frequently exhibited emotional distress, but were still supportive.

Sanders (2009) analysed issues of disclosure of HIV status and found that decisions about disclosure and timing of disclosure were complex and often based on an assumption that a sexual relationship was going to develop long-term. There was a complex mixture of emotion including fear, stigmatization and denial which precluded a woman's ability to disclose. All of the participants in this study desired to have children but wanted to protect their husband from transmission.

Brickley et al. (2009) reported that HIV positive pregnant and postpartum women in their study described managing disclosure of their HIV infection because of fear of stigma and discrimination, particularly to the wider community. Participants described not disclosing their HIV status to family members because most of the participants were in stable health, usually able to hide their infection status, concern about causing emotional trauma to family members, worried about being the object of HIV stigma and discrimination and in particular, that their children could face discrimination whether they were infected or not.

Factors associated with having disclosed to partners were identified as; being married, prior discussion about testing, having a partner with tertiary education and less experience of violence (Makin et al., 2008).

In Thailand, Ross et al. (2012) found that 63% of HIV positive -Thai women had disclosed their HIV status to someone. The significant predictors of disclosure to someone else was high family support, included older age, employment, and high family support.

3.5.9 Theme 9: Family support

Family support was one of the most significant predictors of disclosure and intent to have a child for women who living with HIV (Kanniappan et al., 2008; Ross et al., 2012; Vescovi et al., 2014). This theme reports on findings in relation to family support.

Kanniappan et al. (2008) reported that the main factors for women who wanted and did not have a child were their levels of anxiety about the future and available family support. Women who indicated that they did not have family support and were stigmatised by the family were reluctant to carry for a pregnancy as they were not sure about the future, including child care in event of parental death. Those women who decided to have a child did so based on family support, especially when family members offered to take care of the child in the future in the event of parental death. In addition, awareness and access to ARV was another key factor guiding the final decision on motherhood desire. Moreover, the reaction of family members to HIV positive status among pregnant women found that they are disbelief and shock, whereas parents frequently exhibited emotional distress, but were still supportive (Visser et al., 2008).

There are 2 types of responses regarding family support to women who living with HIV; negative and positive responses from their partners and families. Negative responses; one in 10 women had experienced verbal or physical abuse by an intimate partner since their HIV diagnosis (Myer et al., 2007). Maman et al. (2011) found that

less than 25% of HIV-positive participants' partners accompanied them to the clinic, they described receiving other material and psychosocial support from partners. More women living with HIV reported that their partners were not involved or not supportive, and in some cases direct threats and experiences with violence caused them to fear partner involvement (Maman et al., 2011).

With respect to positive responses; different studies in Thailand report that women were positively supported by her family and husband or partner (Ross et al., 2007; Youngwanichsetha et al., 2010; Liamputtong & Haritavorn, 2014). Ross et al. (2012) found that high family support was one of the most significant predictors of disclosure to someone else. Most participants reported that their male partners were emotionally supportive through the difficult experience of pregnancy and motherhood (Brickley et al., 2009). Most women living with HIV deferred disclosure and requested health workers' support in disclosure, those who disclosed their positive status generally experienced positive responses from their partners (Rujumba et al., 2012).

3.6 Gaps in the knowledge base

The systematic review of the literature in this chapter has highlighted the evidence from various global contexts related to desire to have a child and become pregnant among women living with HIV. It has also highlighted the literature pointing to a number of important issues related to women's problems with living with HIV, the trends towards reproductive desire among these women, the problems experienced by women who living with HIV within the context of pregnancy. The review also

includes the literature on other important factors like family, community and health services which influence these women's reproductive choices.

The literature has importantly identified a number of gaps in the knowledge base on many issues that need further research. For example the following questions remain; How do women who living with HIV make the decision to become pregnant?; How do women who living with HIV reveal their HIV status to their husbands/partners and others?; How is the family involved in influencing pregnancy desire of women living with HIV?; What are the sexual health and reproductive needs of adolescents who are living with HIV positive women?; How do health care providers discriminate against HIV positive pregnant women? And, how do health care providers address the needs of HIV positive pregnant women as well as their rights to health provision and to having a family?

The findings from the literature review, together with my practice and research experience, highlight for me that the most important and interesting issue to emerge is that of decision making process to become pregnant. Only 3 studies identified in this review; 2 international studies Barnes and Murphy (2009) and Chi et al. (2011) and 1 Thai study (Youngwanichsetha et al., 2010) were found on this topic. Barnes and Murphy's (2009) study focussed narrowly on the decision making process to become a mother while those of Youngwanichsetha et al., (2010) and Chi et al., (2011) examined decision making to keep the baby or seek an abortion. None of these 3 studies examined the issue of reproductive decision making more widely, or in detail,

by for example, looking at broader influences like partners or family on decision making, or by looking at decision making over the course of the pregnancy. Further, there are no research studies in Thailand which have inquired into this issue. Because of the limited research in this area any models which explain the reproductive decision making process in women who living with HIV throughout their pregnancy will be helpful, important and provide new knowledge on this area of HIV care.

3.7 The research questions

The research questions of this study are:

1. What is the decision making process to become pregnant in Thai women living with HIV?
2. What are the decisions Thai women living with HIV make throughout their pregnancy and how do they make them?

3.8 The research objectives

The purposes of this study are:

1. To enquire into why HIV positive pregnant women in Thailand have decided to become pregnant and have a child.
2. To explore the decision making processes throughout the pregnancy.

3.9 Conclusion

This chapter has demonstrated the systematic review process used to identify the 81 papers included in this review. The chapter highlights what is known about reproductive health and reproductive choices in women who living with HIV, their pregnancy experiences, the factors influencing pregnancy decision making, experiences by women who living with HIV of stigma and discrimination, the effects of HIV/AIDS on women's health, interactions between women who living with HIV and their health care providers and services, issues around women who living with HIV and family planning, HIV disclosure and family support.

The review reveals several gaps in the knowledge base on decision making processes to become pregnant in women who living with HIV. Since there is so little known about the decision making process to become pregnant in HIV positive women in Thailand I have justified this as a reason for addressing this particular issue in the study. The chapter has posed the research question to be addressed in this thesis, the selection of the appropriate research methodology and methods to answer this question will be outlined in the next two chapters.

Chapter 4

Research Methodology

The purpose of science is to construct a body of knowledge that leads us to understand the phenomena under investigation (Parahoo, 2014). To understand reality in both natural science and human behaviour, we usually investigate by the processes of induction or deduction. These different paradigms produce different ways to understand, predict, prevent or control things under investigation. This chapter will describe the research methodology of the study. It will start by providing a summary of main differences between quantitative and qualitative research – arguing for a qualitative approach to best address the research questions of this study. It will then look at the basic principles such as; sampling, data collection, data analysis and ethics shared by qualitative approaches. Then, the choice of Constructivist Grounded theory is presented as the most appropriate qualitative research approach for this study. In doing so it will also set out the unique features of Grounded Theory – exploring the approaches to data collection, analysis, theory building and rigour.

4.1 Research Paradigms

The term of ‘paradigm’ was first used by Thomas, S. Kuhn, 1962 in ‘The structure of scientific revolutions’ Kuhn (1996). A paradigm or the basic belief systems “*is a basic set of beliefs that we use in guiding our actions, and we use many paradigms that guide disciplined inquiry*” (Guba, 1990:18). The paradigm in Corbin’s view

(Corbin & Strauss, 2008) is a perspective, a set of questions that can be applied to data to help the researcher draw out the contextual factors and identify relationships between context and process.

Guba (1990:18) argues that paradigms are based on three basic assumptions; the ontological, the epistemological and the methodological:

The ontological question: *“What is the nature of the ‘knowable’? Or, what is the nature of ‘reality’?”*

The epistemological questions: *“What is the nature of relationship between the knower (the inquirer) and the known (or knowable)?”*

The methodological question: *“How should the inquirer go about finding out knowledge?”*

Paradigms inform the different practices of research, this section will describe the major three paradigm eras; positivism, post-positivism and constructivism.

4.1.1 Positivism

This paradigm is drawn from the natural sciences, especially physics and chemistry and it has influenced the social and health sciences (Parahoo, 2014). Positivists believe in important characteristics such as, the unity of science, reductionism (reducing complex phenomena to simple laws and these laws are expected to test or predict), scientific method, mathematics as the pattern to other knowledge by mathematical

calculations, realist (the world has an existence independent of our perception of it and an objective way of knowing what it is), empiricism (based on empirical data what can be observed by researcher senses can be called facts), determinism (the notion of cause and effect), and hypotheses that can be tested by deductive process or experimental process (Parahoo, 2014).

Guba (1990) and Lincoln and Guba (1985) describe the basic beliefs of positivism as follows:

Ontology: *“Realist; reality exists “out there” and is driven by immutable natural laws and mechanisms. Knowledge of these entities, laws, and mechanisms is conventionally summarised in the form of time-and context free generalisations. Some of these latter generalisations take the form of cause-effect laws”* (Guba, 1990:20).

Lincoln and Guba (1985) addressed the ontology of positivist that reality is single, tangible and fragmentable.

Epistemology: *“Dualist/objectivist; it is both possible and essential for the inquirer to adopt a distant, noninteractive posture. Values and other biasing and confounding factors are thereby automatically excluded from influencing the outcomes”* (Guba, 1990:20).

Lincoln & Guba (1985) addressed the epistemology of positivist that knower and known are independent and dualism.

Methodology: *“Experimental/manipulative; questions and /or hypotheses are stated in advance in propositional form and subjected to empirical tests (falsification) under carefully controlled conditions”* (Guba, 1990:20).

To summarise, positivists believe that reality can be measured. In the relationship between knower and knowledge, knowledge is independent from the knower.

4.1.2 Post-positivism

This paradigm has been described as a *“naïve faith”* of the scientific method to study social phenomena (Parahoo, 2014:35). Although post-positivism has been through many changes, criticisms and revisions, it has retained many of its original concepts. Post-positivists believe in important characteristics such as, it is possible to be close to the *“truth”*, this belief became known as *“critical realism”*, that social phenomena can be observed and measured to make a tool more objective and examine causes and effects to establish *“correlations or relationships”* between variables, empiricism (what can be observed by researcher senses can be called *“social facts”*) (Parahoo, 2014:35).

Guba (1990: 25) called this paradigm *“critical theory or ideological”* and summarised its basic belief system as follows:

“Ontology: *critical realist, as in the case of post-positivism*

Epistemology: *subjectivist, in the sense that values mediate inquiry*

Methodology: dialogic, transformative; eliminate false consciousness and energise and facilitate transformation”.

According to Creswell (2007), this paradigm approach has the elements of being reductionistic, logical, and places the emphasis on empirical data collection, is cause-and-effect oriented and deterministic based on a priori theories. In terms of practice, post-positivist researchers are likely to view inquiry as a series of logically related steps, believe in multiple perspectives from participants rather than a single reality and espouse rigorous methods of qualitative data collection and analysis. In addition, Creswell (2007) emphasizes the systematic procedures of grounded theory in Strauss and Corbin (1990; 1998) and the analytic steps in phenomenology (Moustakas, 1994) as belonging to post-positivism.

4.1.3 Constructivism

This paradigm is advocated as an alternative to the positivism paradigm after the revolution of science (Kuhn, 1970; Guba & Lincoln, 1989). Originating from the naturalistic paradigm to become the “*constructivist paradigm*” (Lincoln & Guba, 1985: 83) sees researchers recognize the contribution of each individual in constructing a socially constructed reality (Lincoln & Guba, 1985).

Guba (1990:27) summarised the constructivist belief system as follows:

Ontology: *“Relativist-realities exist in the form of multiple mental constructions, socially and experientially based, local and specific, dependent for their form and content on the persons who hold them”.*

Epistemology: *“Subjectivist, inquirer and inquired into are fused into a single (monistic) entity. Findings are literally the creation of the process of interaction between the two”.*

Methodology: *“Hermeneutic, dialectic-individual constructions are elicited and refined hermeneutically, and compared and contrasted dialectically, with the aim of generating one (or a few) constructions on which there is substantial consensus”.*

Moreover, in this paradigm, individuals seek understanding of the world in which they live. The goal of research is to rely as much as possible on the participants' views of the situation (Creswell, 2007). In addition researchers uncover reality as it is formed through interaction with others rather than starting with theory, as in post-positivism. Creswell (2007) refers that leading authors who are committed to this worldview are Crotty (1998), Lincoln and Guba (2000), Schwandt (2001), Neuman (2000), and, in grounded theory, by Charmaz (2006).

In terms of practice, constructivist researchers are interested in the process between the individuals and specific situations in their lives (Creswell, 2007). In addition, Corbin & Strauss (2008) agree with the constructivist viewpoint that concepts and

theories are constructed by researchers and participants who are both trying to explain their experiences.

These various, contrasting paradigms influence the type of research approaches used and an exploration of how that is represented in the world of research follows.

4.2 Two main research paradigms: Quantitative and qualitative research

The two main paradigms in social science, health science and nursing research are quantitative (positivism) and qualitative (interpretivism) which have their own philosophy to inform and frame the knowledge they produce (Parahoo, 2014). This section will compare the differences of main concepts among them.

The paradigm associated with positivist quantitative researchers is a realist ontology (asserts that there exists a single reality independent from any observer's interest), dual objective epistemology (asserts that an observer should exteriorise the phenomena, remaining detached and distant from it) and interventionist methodology (try to predict or control all variables) (Guba & Lincoln, 1989).

The paradigm of interpretivists, or qualitative researchers asserts that behaviour can only be understood in context and the thinking process that give rise to it focuses on subjective inner experiences. Observer and subject are affected by the world around them and researchers cannot be a detached observer. The methods used by

interpretivists are active and flexible and are also unpredictable in the terms of process and outcome (Parahoo, 2014).

Patten (2007) illustrates the differences between quantitative and qualitative research in that quantitative studies aim to test hypotheses and use a deductive approach in research planning. In contrast, qualitative researchers use an inductive approach from the preliminary data. Quantitative researchers design tools for measurement such as structured questionnaires and scales while qualitative researchers obtain data by interviewing or observing participants. For sample sizes, quantitative researchers collect data from large samples because their methods can often enable the same questions to be put to a large sample. In contrast, qualitative studies usually use an in-depth process to deal with a smaller group of people. In addition, a randomised and representative sample is used in quantitative research which enables the researcher to generalise the results, whilst in a qualitative study, the participants are often chosen by purposive sampling and consist of a small group for in-depth study – without the requirement to be able to generalise the findings to others. The findings of quantitative research are mainly presented by quantities or numbers while qualitative research results are presented as themes based on words. The main differences between quantitative and qualitative research can be seen in **table 4.1**.

Table 4.1: Main differences between quantitative research and qualitative research

Paradigm	Quantitative Research (Positivist)	Qualitative Research (Interpretivist)
Ontology (The nature of reality)	Meanings exist in the world Realist	Meanings exist in our interpretations of the world Relativist
Epistemology (The nature of relationship between the knower and the known (or knowable))	Dualist, objectivist Knowledge reflects reality	Interactive, subjectivist Knowledge is interpretation
Methodology (The inquirer go about finding out knowledge)	Deduction Interventionist	Induction Hermeneutic, dialectic
Strategic characteristics	Testing hypotheses	Exploration Holistic approach Dynamic data Context-bound meaning Information-rich case
Purpose	Trends and pattern	Why, How, process
Aim	Attempt to inference and generalisation	Attempt to interpretation Transferability
Sampling	Randomise	Purposive
Samples	Subjects Large numbers	Participants, information-rich case Small numbers

Paradigm (cont.)	Quantitative Research (Positivist)	Qualitative Research (Interpretivist)
Tools	Structured	Unstructured
Data collection	Questionnaires, secondary data, tests, experiments.	In-depth interview Direct observation Documents
Data analysis	Based on statistics	Based on themes or categories
Result presentation	Numbers	Text
Rigour	Validity (internal and external), reliability, objectivity	Credibility, transferability, dependability, confirmability

Summarised from (Guba, 1990; Patton, 2001; Creswell, 2007; Patten, 2007).

4.3 Qualitative Research

4.3.1 Philosophy and features

The qualitative or interpretive paradigm has the key features similar to Lincoln and Guba's description of "*the naturalistic paradigm*" also called *hermeneutic* or *interpretive* paradigm (Lincoln & Guba, 1985:83). Lincoln & Guba (1985) indicate that these axioms or realities are a better fit to the phenomena of social behavior.

Qualitative researchers accept the following;

Ontology: "*Realities are multiple, constructed and holistic*"

Epistemology: "*Knower and known are interactive and inseparable*"

The possibility of generalization: *“Only time-and context-bound working hypotheses are possible”*

The possibility of causal linkages: *“All entities are in the state of mutual simultaneous shaping, so that is impossible to distinguish causes from effect”*

Axiology (The role of values): *“Inquiry is value-bound”*

(Lincoln & Guba, 1985:37)

In qualitative research, researchers use interpretive and theoretical frameworks to shape their studies, and also bring these paradigms into their research (Creswell, 2007). The essential feature of qualitative research is ‘exploration’ as a means to understand and is inductive, interactive, holistic, flexible and a reflexive method of data collection and data analysis (Parahoo, 2014).

In the other words, Creswell (2007) argues that qualitative inquirers make certain assumptions about reality, knowledge and its construction; these philosophical assumptions consist of - ontology, epistemology, axiology, rhetoric and methodology.

Ontology

Ontological relates to the nature of reality and its characteristics. Qualitative researchers see reality as fluid and socially constructed instead of the fixed reality of the positivist paradigm (Creswell, 2007).

Epistemology

Epistemological assumptions mean that qualitative researchers want to get close to their participations to understand how they construct their realities (Creswell, 2007).

Axiology

Qualitative researchers make explicit their own values and how they position themselves in the study, recognising the subjective element of qualitative research and the importance of reflexivity (Creswell, 2007).

Rhetoric

Rhetorical assumption, Creswell (2007) described that rhetoric is writing style or the form uses of language. Qualitative researchers use metaphors and they prefer to use personal writing styles.

Methodology

Qualitative methodology or procedures, is “*a way of thinking about and studying social phenomena*” (Corbin & Strauss, 2008:1). Creswell (2007) describes that qualitative researchers follow an inductive method, from the ground up, and sometimes, research question can be modified during data collection and analysis in order to understand the research focus or questions better.

4.3.2 Qualitative research design

The process of designing qualitative research starts with the broad assumptions around its paradigms (Creswell, 2007). Qualitative methods tell us a story of peoples' experiences, the story gives us insight into the nature of their lives and experiences—often by in-depth interviewing and developing rich cases from purposive sampling to enable the researcher to describe or interpret the participants experiences (Patton, 2001). The following sections explore the general methodological features of qualitative research in terms of its approach to data collection, analysis, ethics and rigour.

4.3.3 Data collection in qualitative research

Three of the most widely used data collection methods in qualitative research are; interviewing, direct observation and documentary analysis (Patton, 2001; Creswell, 2009).

Interviews

Qualitative researchers often employ in-depth interviews that aim to delve into participant's interpretation of their lives and perspectives - seeking rich and detailed accounts for analysis (Warren, 2001). The interview is like "*a pipeline for transmitting knowledge*" from the participant to the researcher (Holstein & Gubrium, 1997:113). Researchers conducting face to face interviews with participant (s), it is one of the main ways to explore- in detail- participants' experiences of their lives

(Creswell, 2009). Rapley (2004:16) argues that an in-depth qualitative interview is “*Interview-data-as-resource: data seen as reflecting the interviewees’ reality outside the interview. Interview-data-as-topic: the interview data collected are also seen as reflecting reality jointly constructed by the interviewee and interviewer*” (Rapley, 2004:16). In addition, the qualitative interview is a conversation about the phenomenon under investigation and researchers employ open-ended questions to investigate the topic, collecting data typically from multiple participants (Creswell, 2007).

Observation

Patton (2001:48) describes observation as; “*going where the action is, getting one’s hands dirty, participating where possible in actual programme activities, and getting to know programme staff and participants on a personal-level*”, the purpose of observational data is to describe the setting, the activities, the people in activities and the meaning of what was observed. Observations are those methods in which the researcher takes *field-notes* or records participants’ activities and interactions within their own environment. The types of observation are where observation can be *covert*; where the researcher conceals their role) *overt*; where the researchers role is known. Observation can also be where the researcher is an active participant or without participating (Creswell, 2009).

Documents

Qualitative researchers may collect data from many resources such as journals, public documents, private documents, meeting reports, official reports, newspapers diaries, letters etc. (Creswell, 2009). These can then be subject to some form of analysis – thematic or discourse analysis for example. Documentary analysis may also be conducted alongside interviews or observation as well as being the sole method of data collection.

4.3.4 Sampling in qualitative research

Patten (2007) described that qualitative researchers often obtain data by purposive sampling, typically focusing on a small sample. Quantitative methods typically gather from a larger samples selected randomly in order to generalise to the population which it represents. On the other hand, in qualitative methods, purposive sampling allows sampling from a population who have experienced the phenomena under investigation and can provide information-rich cases (Creswell, 2009).

4.3.5 Data analysis in qualitative research

Corbin and Strauss (2008:1) summarised the meaning of qualitative analysis that “*A process of examining and interpreting data in order to elicit meaning, gain understanding, and develop empirical knowledge*”. This process comes after and sometimes together with data collection, often, according to Creswell we do not

always know clearly which stage we are in because of qualitative research' emergent nature (Creswell, 2009).

Qualitative analysis varies from method to method, but generally speaking, after collecting, organising and storing data, data are separated into themes or categories. This process is recognised as “ *working through multiple levels of abstraction*” which starting with “*the raw data and forming larger categories*” then developing matrices, tables, using visual or figures to convey the data or theory in a meaningful manner (Creswell, 2009:43).

Patten (2007) argues that the analytic process of qualitative research has three steps 1) the coding data into group of domains, each domain containing the relevant data. 2) the development of core ideas within the domains with short summaries, and 3) cross-analysis where the researcher groups the core ideas into categories based on their similarities.

4.3.6 Ethical principles in qualitative research

Beauchamp and Childress (2013)' four principles is one of most widely used ethical frameworks of both medical ethics issues and health related research (UKCEN, 2001). Based on 4 key principles they are suggested as a framework particularly adapted to qualitative research.

1) Respect for autonomy (respecting and supporting autonomous decisions)

This principle includes both a negative and positive obligations that autonomous actions should not be subjected to control by others, this principle respects the rights, liberty, privacy, confidentiality, truthfulness and is centered on the importance of informed consent. Respect for autonomy in health care and research involve clearly explaining the purpose and risks of research to participants and ensuring they have the information and time – free from pressure – to make an informed decision as to whether to participate or not.

2) Beneficence (a norm of avoiding the causation of harm)

This principle argues that research is fundamentally about ‘doing good’ and that this should be a goal of researchers. That good may not be to the individuals concerned but that research should always aim to provide a benefit for society.

3) Non-maleficence (a group of norms pertaining to relieving, lessening, or preventing harm and providing benefits and balancing benefits against risks and costs)

This principle argues that research should – intentionally or unintentionally – not harm its participants. Research should:

- not to inflict evil or harm
- prevent evil or harm
- remove evil or harm

4) Justice (a group of norms for fairly distributing benefits, risks and costs)

Researcher must always treat their population from which their participants are to be drawn from fairly. Taking part or not taking part in research should not disadvantage those who chose not to take part or advantage participants.

Qualitative researchers should apply ethical principles to their study in order to protect participants from both physical and mental harm (Patten, 2007). Another important value is that participants have a right to privacy and their individual information must be kept confidential. They must also have the right to know and understand about the purpose of the research before they engage (Patten, 2007).

Patten (2007) suggests the use of informed consent as one way to promote autonomy in a research study. It is important the researcher informs participant of 1) the purpose of the study, 2) what the process is and what will be done to them during the time of study, 3) what the potential benefits are and what the potential hazards are; including harm to them and others, 4) the fact that a participant may withdraw at any time without penalty and lastly, researchers should provide the information above in writing with participants freely completing a consent form.

4.3.7 Rigour and qualitative research

Trustworthiness is an important aspect of research and qualitative research is criticised for a lack of rigour – especially when compared to quantitative research. In response to this a number of authors have advocated measures by which qualitative researchers

can demonstrate the rigour of their analysis. One approach commonly used is described by Lincoln and Guba (1985:300) and is based on four elements;

4.3.7.1 Creditability

There are several techniques to increase higher creditability (Lincoln & Guba, 1985; Guba & Lincoln, 1989) such as:

Prolonged engagement

Prolonged engagement allows the researcher build trust with the participants. An extended study period can also reduce the chance of misinformation (Lincoln & Guba, 1985; Guba & Lincoln, 1989; Creswell, 2007).

Persistent observation

Sufficient observation helps the researcher identify and point out the most relevant problems and issues thus preventing the risk of insufficient or premature results (Lincoln & Guba, 1985; Guba & Lincoln, 1989; Creswell, 2007).

Triangulation

The use of different sources, methods, investigators and theories to recheck the contextual validation of collected data (Lincoln & Guba, 1985; Guba & Lincoln, 1989), for example;

- Multiple sources: can be “*multiple copies of one type of source (such as interview respondents) or different sources of the same information (for example verifying an interview respondent’s recollection)*” (Lincoln & Guba, 1985:305).
- Different methods: can be either different data collection modes (such as interviews, questionnaires, observations, experiments or testing) or different designs (Lincoln & Guba, 1985).
- Different investigators: the naturalist view, could be the members of a team, those members need good communication with all members and keep “honest” based on the facts be founded (Lincoln & Guba, 1985:307).
- Multiple theories: Lincoln & Guba (1985) argue that differing theories may expand and diversify the findings by providing different perspectives on the data (Lincoln & Guba, 1985:307).

Moreover, Patten (2007: 157) describes how triangulation can add rigour to qualitative research – and describes how triangulation can take different forms;

- Data triangulation: this technique uses multiple sources of data from two or more types of participants.
- Method triangulation: this technique uses just one type of participant but collects data using different methods such as in-depth interviews, focus group discussions and observation.

- Researcher triangulation: this technique uses a research team to collect and analyse data. The research team help to check the accuracy of transcriptions and compare interpretive results in order to reduce the potential of bias with on researcher.

Peer debriefing

The task of the peer de-briefer is to ensure that the investigator has conducted the study correctly and that the process of data collection and analysis is clear (Lincoln & Guba, 1985). Peer de-briefers may be one or more reviewers (Creswell, 2007). In addition, an external auditor can be used to check the accuracy of transcriptions, or the relationship between the research question and data interpretation (Creswell, 2009). This process is also sometimes called peer review (Patten 2007; Creswell, 2007, 2009).

Negative case analysis

Negative case analysis eliminates all ‘outliers’ and exceptions by continually revising initial hypotheses until all cases ‘fit’ (Lincoln & Guba, 1985:312).

Referential adequacy

Referential adequacy requires the researchers to store a portion of raw data – for interrogation once the analysis is complete – to examine the fit of any theories or thematic explanations (Lincoln & Guba, 1985).

Member checks (in process and terminal)

This technique sees the researcher take either raw data, analysed or interpreted data back to the participants or stakeholders in order to judge the accuracy and creditability of their analysis and interpretations (Lincoln & Guba, 1985; Guba & Lincoln, 1989; Creswell, 2007)

4.3.7.2 Transferability

To establish transferability, qualitative researchers must provide a ‘proper thick description’ to enable others to judge the quality and transferability of the findings (Lincoln & Guba, 1985:316).

4.3.7.3 Dependability

Dependability means an auditor (second party) can audit the decisions, analytic process, methodology, and findings of researcher (first party) (Lincoln & Guba, 1985). There are many ways to establish reliability or dependability such as merging in the process of tape recording, tape transcribing and coding by multiple coders (Creswell, 2007). In addition, Creswell (2009) recommends that single researchers should find another person who can cross-check the codes for what he called “*intercoder agreement or cross-check*” (Creswell, 2009: 191). This practical method, for postgraduate researchers, can often include academic supervisor(s).

4.3.7.4 Confirmability

The major technique for establishing confirmability is the confirmability audit, it is included in the later process of the study to enable that the auditor is to examine the study process and product so that 'the bottom line' might be accepted (Lincoln & Guba, 1985: 318). This can be two or more auditors confirming (independently) about the accuracy, meaning and relevance of the data as well as the findings (Polit & Beck, 2014).

4.3.8 Interview transcription quality

A further issue of rigour is the way in which interviews in different languages are tested for accuracy of meaning and interpretation. Poland (2001) and Patton (1990) suggest that the strategies to maximise transcription quality have involved the methods as following:

4.3.8.1 Tape quality

To establish the quality of tapes, not only the quality of tape recorder should be checked but also many things that occur before, during and after the interview such as

- Equipment; such as checking of tape recorder, battery, microphone and other accessories.

- Before interview; checking such as the interview location being free from interruptions, position of recorder and interview and testing the recording system
- After interview; listen to some part of the recording in order to make sure that the conversation is recorded, then label and back up copy before providing it to the transcriber.

4.3.8.2 Selecting the transcriber

Ensure that transcribers understand the process of transcribing, confidentiality issues and the relationship between researcher and respondent. Prior experience is useful.

4.3.8.3 Reviewing transcription quality

One way to re-check any error in transcription is review onscreen; the researcher selects some of transcripts for review onscreen while the interview tape is rolling, takes notes and adjusts for minor semantic errors and major errors (meaning).

4.3.8.4 Member checking

This method includes the rubric of member checks for establishing credibility (Guba & Lincoln, 1989). For example give the transcripts back to respondents to recheck validity and originality (Lincoln and Guba, 1985).

4.4 Justifying a qualitative approach and selecting an appropriate method

Given the aim to explore, in-depth, the process of decision making among HIV positive pregnant women a qualitative design was chosen for this study. The research questions in this study lend themselves to a qualitative rather than quantitative approach because these questions focus on complex issues and processes around pregnancy which Corbin and Strauss (2008) call the inner experiences of people; their feelings, beliefs, values, and perception in their social context. Secondly, pregnancy decisions in HIV positive pregnant women are complex including the reasons to become pregnant, the process of decision making within a context that requires the in-depth exploration a qualitative method can provide. Lastly, qualitative research fits with the aim of exploring such a social process of decision making in order to generate a conceptual model.

There are many approaches in qualitative research, the common qualitative approaches in social and health science are ethnography, phenomenology, case study, and grounded theory (Creswell, 2007; Parahoo, 2014). Generally, any of these approaches *could* explore the topic of this research study – but when applied to the particular research questions in this study Grounded theory seemed the best fit to address them.

This section will summarise the important concepts of each approach and discuss why another approaches are rejected and why grounded theory is chosen for this study.

4.4.1 Ethnography

Ethnography focuses on how individuals or groups experience shared meaning or interactions within a particular culture. Ethnographers believe that people develop shared patterns of behaviour, belief, values, norms and language influenced by their culture, in other words, human behaviours can influence and be influenced by the cultural groups within which they live - the role of an ethnographer is to describe and understand that cultural group (Creswell, 2007; Parahoo, 2014). The main method of data collection in ethnographic research is participant observations – but may include interviews and documentary analysis. Researchers spend a significant amount of their time within the cultural setting and immerse themselves in the cultural group which they want to study (Parahoo, 2014).

Why not ethnography?

The ethnographic approach focuses on cultural groups and societies and how individuals or groups share experiences or interactions within a particular culture. This study wants to explain the pregnancy decision making process HIV positive pregnant women take about their reasons to become pregnant and the pregnancy process. This research question, therefore, is about individual based decisions and seeks to model the process – it is not a study that seeks to understand a cultural group - therefore, the ethnographic method is not suitable to address the research questions of this study.

4.4.2 Phenomenology

Phenomenology focuses on an individual's interpretation of their experiences, and explores how people experience a particular phenomenon (Parahoo, 2014). Phenomenological researchers aim to describe and interpret the meaning of people's lived experiences (Creswell, 2007).

Why not phenomenology?

Phenomenology focuses on consciousness and the meaning of lived experience, but this study does not seek to understand the experience per se but wants to explore the process of pregnancy decision making and generate a conceptual model to guide practice and service delivery model. Therefore, phenomenology is not suitable as a method to use in this study as it would not enable the construction of a conceptual 'theory' that allows all the components and connections therein to be developed. .

4.4.3 Grounded theory

Grounded theory itself is not a theory but describes the development of middle range theory grounded from the data to provide an explanatory model/theory about the subject under investigation (Parahoo, 2014). Grounded theory aims to generate conceptual theories that explain a social process or a social phenomenon (Glaser & Strauss, 1967; Strauss & Corbin, 1990; Glaser, 1992; Charmaz, 2006). While ethnography and phenomenology focus on either culture or consciousness and lived experience – neither of which allow for the explanation, in detail, of a complex social

process. Grounded theory, on the other hand, focuses on developing a model or theory grounded from the data that explains the complex dimensions of a social process. The aim of this study is to provide a detailed explanation decision making over a period of time in Thai women who living with HIV and describe the varied elements of this complex process – in particular to identify how the decisions are made to provide a framework that may help professionals understand the processes involved – grounded theory provides the best way to do this.

4.5 Grounded theory

This section explores grounded theory as an umbrella term that includes a variety of approaches under that heading– its philosophical perspectives, its origins and the various different approaches to grounded theory which have emerged over time. It will then explain which grounded theory approach is to be used in this study. Grounded theory is an approach to research that sees the researcher use data collection and analytical processes to build a theory. It has been subject to change and development over the years – as the following section will describe. However, in all versions the features of grounded theory are that data analysis occurs alongside data collection and that analysis informs the collection of further data. Analysis is, at first, supposed to be ‘grounded’ in the data and not influenced by prior knowledge. Unlike other qualitative approaches, grounded theory then presents an explanatory theory – often in a diagrammatical form to illustrate the elements of a social process.

4.5.1 Different schools of Grounded theorists

There are 3 versions of grounded theory; Glaser and Strauss, Strauss and Corbin and the constructivist Grounded Theory of Charmaz.

4.5.1.1 Glaser and Strauss (1967)

Glaser and Strauss developed a grounded theory in 1967 as a response to the dominance of quantitative methodology within social research at that time. Glaser and Strauss developed the concept of grounded theory where the researcher generates conceptual categories to illustrate a social process – resulting in the generation of a theoretical model (Glaser & Strauss, 1967:23). In their version of grounded theory the researcher avoided subjectivity by not preceding the research with a literature review and rigorously building the theory with strong links to the raw data – arguably – to produce an objectively obtained theory of the social process under investigation.

4.5.1.2 Strauss and Corbin (1990, 1998)

Strauss and Corbin later modified Glaserian grounded theory to their grounded theory with a process that moved away from the positivist approach of Glaser. Advocating a literature review they also presented a more systematic and analytic procedure (Creswell, 2009; Charmaz, 2006).

4.5.1.3 Charmaz (2006)

Charmaz advocates constructivist grounded as a more flexible approach and one that gives more consideration to the researcher's and participants views on the emerging theory (Creswell, 2009). In addition, Chamaz claims that "*the interpretation of constructivist delve into people implicit meanings, processes and actions that constitute the categories*" thereby adding a further element to the development of the theory (Charmaz, 2006:146).

Charmaz (2006) claims that constructivists develop grounded theory in the following manner:

- Grounded process is fluid, interactive and open-ended.
- Researchers are part of the study rather than above it.
- Analytic directions arise from how researchers interact and interpret their comparisons and emerging analyses rather than from external prescriptions.

4.5.2 Critical differences of three approaches to grounded theory

The two originators, Glaser and Strauss, ultimately disagreed about the meaning and procedures of original grounded theory, Glaser has criticised Strauss's systematic and analytic procedures arguing that it forces data analysis into preconceived categories, prescribed and structured (Glaser, 1992; Creswell, 2009; Parahoo, 2014: Chamaz).

While Charmaz criticises the differences between Glaser and Strauss in so much as

Glaser having a background in quantitative approaches (and so does his Grounded theory) for example. Charmaz is also critical of both other procedures in that they tend to be inflexible and do not allow for the co-construction of the theory.

It's also clear that – although adopting similar overall processes (the concurrent data collection and analysis for example) that the different strands of grounded theory use different terminology for their analytical steps; Glaser uses 'Theoretical coding' and 'coding families' while Strauss uses 'coding paradigm' and 'axial coding' (summarised from Bryant and Charmaz (2007:198-201). Moreover, in Strauss and Corbin's approach, researchers do the data collection and data analysis as a systematic process while Charmaz believes that participants are included as a part of this process.

Notwithstanding the differences in terminology the following section describes the different steps and processes in grounded theory – drawing out the differences where appropriate. It is argued that these analytical steps are the most appropriate way of answering the research questions in this study.

4.5.3 Grounded theory and the status of literature reviews

According to the classical grounded theory described by Glaser, he advocated that researchers should avoid a formal literature review and the exploration of previous substantive theories beforehand to avoid the 'dangers' of "received theory" contaminating the analysis process and theory generation. The motivation for this is linked very closely to Glaser's desire to make the method as objective and positivist as

possible. (Glaser & Strauss, 1967; Glaser, 1978; Charmaz, 2006; Birks & Mills, 2011). However, later adaptations of grounded theory criticised this approach and argued that a literature review could have a role – indeed a purpose – in grounded theory studies (Parahoo, 2014, Charmaz, 2006, 2014). Charmaz agrees that a literature review beforehand could inform the design of the research question and also – at certain stages – assist the research’s ideas on emerging categories (Charmaz, 2006, 2014).

The literature review in this study was undertaken before a method was decided upon – in order to identify the gaps in the knowledge base to be addressed. If one were to follow Glaser that would immediately prevent a Grounded theory approach being used. The review in this study allowed the systematic analysis of the state of knowledge around pregnancy decision making and the factors influencing pregnancy decisions among women living with HIV in 27 countries across the world. This review therefore contributed to the understanding of relevant knowledge which helped the development of a new knowledge and theory. It is therefore argued that most recent advocates of grounded theory - especially Charmaz - are comfortable with a prior literature review – arguing that it informs the questions and also later stages of theory building. They also advocate the researcher being clear that early coding is faithful to the data and not overly driven by the literature – something demonstrated in how the coding is presented in the write up to allow the reader to judge this.

4.5.4 Key processes of grounded theory

4.5.4.1 Theoretical sampling in grounded theory

Theoretical sampling: Theoretical sampling is one type of purposive sampling in qualitative approach. Corbin and Strauss (2008:65) address the definition of theoretical sampling saying that “*Sampling on the basis of concepts derived from data*”. Strauss and Corbin (1990:176) define “*theoretical sampling is on the basis of concepts that have proven theoretical relevance to the evolving theory*”. In addition, Strauss and Corbin (1998:73) argue that theoretical sampling involves “*sampling on the basis of emerging concepts, with the aim being to explore the dimension range or varied conditions along which the properties of concepts vary*”. Participants are selected according to the descriptive needs of the emerging concepts and theory (Charmaz, 2006; Bryant & Charmaz, 2007). Moreover, Theoretical sampling helps researchers to choose key participants which helps the researcher form the theory (Creswell, 2009).

4.5.4.2 Data collection in grounded theory

Data collection occurs together with data analysis in grounded theory. When the first participant is interviewed data are analysed before the next interview; researchers go to the field to collect data, analyse the data, return back to the field to gather more information and so on (Creswell, 2009). Research procedures in grounded theory can

be summarised in the following manner (Strauss & Corbin, 1990, 1998; Creswell, 2007);

- 1) Researchers begin by determining if grounded theory is a good fit with their studies or research problems
- 2) Individual's experiences and processes will be investigated by interviews. Researchers define what is a process? What is a core process or phenomenon, what are causal conditions? What are strategies? And what are consequences?
- 3) Opened ended questions are typically asked in interviews and other methods such as observations and documents may be used, until data are saturated, this may involve 20-30 interviews.
- 4) The analysis of the data involves open coding which forms categories; each category finds several properties or subcategories, and dimensions. Then axial coding and developing a storyline that connect the categories.
- 5) Lastly, the researcher develops the grounded theory.

4.5.4.3 Data analysis in grounded theory

4.5.4.3.1 Coding

Corbin and Strauss (2008:66) argue that "*coding*" is a common term for the use of qualitative analysis, coding is the verb and codes are the names given to the concepts derived through coding. Moreover, they suggested that coding involves interacting with the analysis such as the use of questioning, making comparisons and developing

the concepts and categories from their properties and dimensions. This **table 4.2** below shows the examples of coding.

Table 4.2: Coding procedures (the examples)

Coding			
Examples	Categories	properties	dimensions
Glaser (1992) gives an example in his study	-Pain	-duration -organs of body	-long, short -head to toe
Strauss & Corbin (1992) gives an example in their study	-Use (drug)	-frequency -duration -degree -type	-occasionally, -minute to hour - try to addict -oral, injection, inhalation

In addition, there are two types of coding in classic grounded theory, substantive coding and theoretical coding (Bryant & Charmaz, 2007:265). Substantive coding, which includes open coding and selective coding together. Theoretical coding conceptualises how the substantive codes may relate to each other to be integrated into the theory (Bryant & Charmaz, 2007:283). The next section will describe and compare “coding” between two of the most commonly used methods of grounded theory; Strauss and Corbin (Strauss & Corbin, 1990, 1998) who divide coding into 3 phases and Charmaz (2006) who separates coding into 2 phases.

A) Strauss and Corbin's coding strategy

Strauss and Corbin (1998) described that grounded analysis consists of 3 phases: Open coding, axial coding and selective coding.

1. Open coding

Open coding is a dynamic and fluid part of the analytic process through which concepts are identified and their properties and dimensions are discovered in data”, and “open coding” is the first step of analysis. During open coding, data are formed into “categories” which are closely examined for differences and similarities (Strauss & Corbin, 1998).

2. Axial coding

Axial coding is “*the process of relating categories to their subcategories, termed “axial” because coding occurs around the axis of category, linking categories at the level of properties and dimensions*”, and the purpose of axial coding is to begin the process of building data from categories and subcategories to form more precise explanations of the phenomena, moreover, it is a sense of how categories relate to subcategories along the lines of their properties and dimensions (Strauss & Corbin, 1998:123).

3. Selective coding

Selective coding is “*the process of integrating and refining the theory*”, in this step, the data may become core categories and theory by using several techniques for the

integration of concepts such as the writing of a storyline, making use of diagrams and reviewing and sorting of memos (Strauss & Corbin, 1998:143,148).

B) Charmaz's coding strategy

Coding means “*categorising segments of data with a short name that simultaneously summarises and accounts for each piece of data, your codes show how you select, separate, and sort data to begin an analytic accounting of them*” (Charmaz, 2006:43).

Coding of Charmaz approach has at least 2 phases, ‘*initial coding and focused coding*’ (Charmaz, 2006: 42).

1. Initial coding; (summarised from Charmaz, 2006: 47-54).

a. The logic of initial coding: Researchers remain open to explore, stick closely to the data, and try to see the interaction of the data rather than applying pre-existing categories to the data. In this step, open coding may spark researchers’ thinking and allow new ideas to emerge, initial codes aim to remain open to other analytic possibilities and create codes that best fit the data they have rather than force the data fits to codes.

b. Initial coding practices: Charmaz (2006) suggests that researchers pick up the general terms of experiences or events from the interviews, codes tell us about the participants’ meanings or actions, if general terms seem significant, then qualify them. Initial codes help us to separate data into categories and to see a process. Charmaz suggests that coding:

- Remains open
- Stay close to data
- Keeps the codes simple and precise
- Preserves actions
- Compare data with data
- Moves quickly through the data

c. Word-by-word coding: Some researchers use this technique which may be helpful when working with documents or certain data such as Internet data.

d. Line-by-line coding: This first step of coding means namely each line of the transcript or other data such as document, observation. It helps researchers to identify explicit concerns as explicit statements, and also help to refocus later interviews.

- Broken down the data into their properties
- Defining the actions on which they rest
- Looking for tacit assumptions
- Explicating implicit actions and meanings
- Crystallising the significance of the point
- Comparing data with data
- Identifying gaps in the data

e. Using a comparative method: Constant comparative method is to compare data with data to find similarities and differences. For example, we

compare interview statements and incidents within the same interview and compare in different interviews.

2. Focused coding: (summarised from Charmaz, 2006: 57-59).

Focused coding is the second phase of coding, it means *“using the most significant and/or frequent earlier codes to sift through large amounts of data. Focused coding requires decisions about which initial codes make the most analytic sense to categorise your data incisively and completely”* (Charmaz, 2006: 57). It is more directed, selective and conceptual than initial coding. Researchers develop focused codes through comparing data to data then compare data to these codes which help to refine them.

3. Axial coding

Axial coding relates categories to subcategories, determines its properties and dimensions, emerge earlier broken data from initial coding to emerging analysis (Charmaz, 2006: 60). In addition, Charmaz noticed that some studies or researchers may not do axial coding because axial coding provides a frame to apply which may limit researcher's visions, this would depend on the preference of the researchers (Charmaz, 2006: 61).

4. Theoretical coding

Theoretical coding follows the selected codes from focused coding, it specifies the possible relationships among those categories, and they are needed for axial coding

(Charmaz, 2006: 63). Theoretical coding is conceptual and moves the researcher to think and link the relationships of categories to an analytical level in order to develop a substantive model (Charmaz, 2006: 63). In this stage, the researcher might clarify the general context, see initial structural ordering and the direction of substantive codes.

4.5.4.3.2 Comparison or Constant Comparative Method (CCM)

Glaser and Strauss (1967) suggested that when used to generate theory, CCM can be applied to data units of any size (Glaser & Strauss, 1967: 45-60). This method aims to understand human phenomena in their experiences and context by comparing the similarities and differences with all others. CCM informs every step of the data collection and analysis process in grounded theory. The researcher constantly compares and contrasts the emerging codes in an iterative process that leads to the development of categories and beyond.

4.5.4.3.3 Memos

Memos are *“the researcher’s record of analysis, thoughts, interpretations, questions, and directions for further data collection”* (Strauss & Corbin, 1998:110). Memos help researchers to reflect the important word(s) and thinking from their field notes which need to be investigated or compared further (Strauss & Corbin, 1998:110). Making memos is *“a process that researcher keeps track of data collected, code data and cluster together, making memos goes through the study that a researcher is warned what data need to be labels and what become next”* (Bryant & Charmaz, 2007:119).

In the memo writing process, the researcher analytically interprets data through sorting, analyzing and coding data in memos (Bryant & Charmaz, 2007). Moreover, memoing not just describes the data but it is a methodological practice, a conceptualization of the researcher's ideas (Charmaz, 2006).

4.5.4.3.4 Theoretical saturation

Theoretical saturation is achieved through constant comparison of incidents in the data to evoke their properties and dimensions until no new properties and dimensions emerged from continued coding and comparison (Bryant & Charmaz, 2007:265).

4.5.4.3.5 Theory building

The result of data collection (interviews, observations and documents) and data analysis (open coding, axial coding and selective coding) is a model or theory (substantive-level theory). The substantive-level theory may be tested later for its empirical verification by subsequent quantitative or mixed method research, however, the study may end at this point with the final generated theory - to be tested by others (Creswell, 2007).

4.5.5 Rigour in grounded theory

Glaser and Strauss argue that rigour in grounded theory should be linked to the clarity and reproducibility of the strategies used for collecting, coding, analysing and presenting data, (Glaser & Strauss, 1967; Parahoo, 2014). However, this is only one aspect. Earlier in this chapter the generic issue of rigour in qualitative research was

outlined – here Charmaz (2006) suggests a further set of criteria – in the form of questions to be asked of the grounded theory - that can be used to judge the trustworthiness, veracity and rigour of a constructivist grounded theory study:

1. Creditability

- Has the research achieved intimate familiarity with the topic?
- Are the data sufficient to support the results?
- Has the researcher made systematic comparisons between categories?
- Do the categories cover a wide range of empirical data?
- Are there strong logical links between the gathered data, argument and analysis?
- Has the research provided enough evidence for claims?

2. Originality

- Are the categories fresh? Do they offer new insights?
- Does the analysis provide a new conceptual rendering of the data?
- What is the social and theoretical significance of this work?
- How does the theory challenge, extend, or refine current ideas, concepts and practices?

3. Resonance

- Do the categories portray the fullness of the studies experience?

- Have the researchers drawn links between larger communities, institutions and individual lives, when the data so indicate?
- Does the theory make sense to the research participants or people who share their circumstances? Does the analysis offer them deeper insights about their lives and worlds?

4. Usefulness

- Does the analysis offer interpretations that people can use in their everyday lives?
- Do the analytic categories suggest any generic process?
- Can the analysis spark further research in other area?
- How does this work contribute to knowledge? How does it contribute to making a better world?

4.5.6 Selecting the best grounded theory approach

The constructivist approach of Charmaz (2006) was chosen for this study because this approach seems to include the participant's voice in the study more prominently than other grounded theory approaches. In addition, this approach is more flexible in that in Charmaz' approach process, she agrees that in practice, the logic of grounded theory is not often in a "*linear*" form which starts with data collection, data analysis and ends with writing of results but acknowledges that the researcher sometimes has to go back to the field for further and deeper data analysis. Charmaz also argues that gathering

rich data to learn how people make sense of their experiences and actions can be conducted by a variety of methods - as tools - rather than recipes or packages such as ethnographic, intensive interview and textual analysis (Charmaz, 2006). Grounded theory includes these tools, for instance, memos, coding categories, comparing data, theoretical sampling, saturation and sorting. These processes are argued to be the most appropriate way to construct an explanatory theory to explain the pregnancy decision making process of Thai HIV positive pregnant women – the central aim of this study.

4.6 Conclusion

This chapter has outlined how a qualitative research methodology was selected as the process to investigate the research question in this study as it fits well with the aim of exploring the decisions Thai women who living with HIV make during their pregnancy. Moreover, the constructivist grounded theory of Charmaz was chosen as the research approach and method to generate a pregnancy decision making process model/theory which is shaped and constructed by personal and social process. The following chapter sets out how the methodological descriptions in this chapter were put into practice in the field.

Chapter 5

Research Method

This chapter describes the research method. It outlines the steps taken to put the methodology discussed in the previous chapter into practice. It includes the study setting, the practical and ethical considerations, sampling strategy and participants. It then covers recruitment, research safety, transcription quality, and the processes of the grounded theory data collection and analysis – culminating in the final stages of theory development.

5.1 Study setting

This study took place in the ante-natal care settings 2 provincial hospitals, Mahasarakham and Roi-et, in the Northeast of Thailand (see **figure 5.1** for setting).

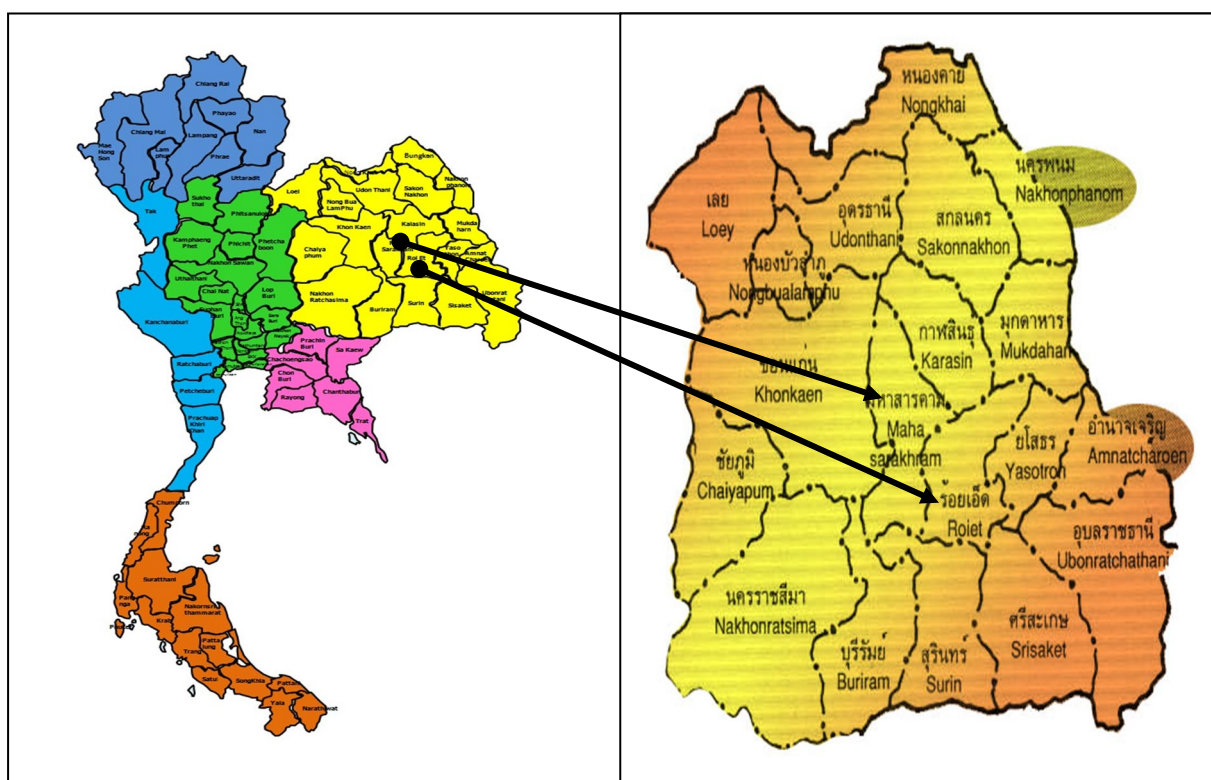


Figure 5.1: Setting of data collection

These two hospitals were chosen because Roi-et province has the fifth highest prevalence of HIV in Northeast Thailand and Mahasarakham province has the biggest HIV/AIDS care centre in the region. In addition Mahasarakham University has good academic contacts and a 'Memorandum of Understanding' (MOU) with these two hospitals and regularly sends nursing, medical and another health science students to practice in these hospitals. The characteristics of the two hospitals are described below:

1. Mahasarakham Hospital, Mahasarakham province: Mahasarakham hospital is a secondary level hospital and provides the largest public health service in the province. Both HIV negative and HIV positive pregnant women services are provided here in the Department of gynaecology and obstetrics. For HIV positive pregnant women care also shared with the integrative AIDS care centre.

2. Roi-et Hospital, Roi-et province: Roi-et hospital receives patients from 22 district hospitals. Again, in Roi-et hospital, services for HIV negative and HIV positive pregnant women are provided by Department of gynaecology and obstetrics. There is also an AIDS care clinic connected with this department.

Both locations have good, safe and private rooms for counselling that can also be used for research interviews.

5.2 Ethical considerations

This study had ethical approval from the University of Hull and also from the hospitals where the research was conducted (See **appendix E**). The following describes how the

study was designed to reflect the ethical principles that guided the research outlined in the previous chapter:

1) Respect for autonomy

This principle respects the rights, liberty, privacy, confidentiality, truthfulness and is centered on the importance of informed consent.

To respect the autonomy of participants in this study the following steps were taken;

- Participants were provided with a clear explanation of the purpose, method, study period and risks of the research to participants – this was done verbally and also by the provision of an information sheet (**appendix B**). Participants were given a period of time within which to make their decision. Participants who agreed were invited to sign a consent form (**appendix C**) in private room without pressure.

- The participants were free to ask questions about the project and also informed that they could stop the interview whenever they wanted.

- The interview took place in a private room.

- To respect the rights and the time of patients, the interviews would start after their clinic.

2) Beneficence

To address this principle of ‘doing good’;

- Participants were made aware that although the study may not directly help them it could help other women in the future.

3) Non-maleficence

This principle argues that research should not– intentionally or unintentionally – harm its participants. To that effect;

- Participants were assured of confidentiality (except in the case of an emergency or the patient expresses an intention to harm herself or others, in this instance the researcher may have to consult the women’s healthcare team without the woman’s permission). Women were also assured that if they became upset the interview would stop and informed that they could opt out of the study at any time.

- All recruitment and interview meetings took place in a room where privacy and confidentiality was assured.

- Any emergency situation in the woman’s overall health would immediately halt the interview and the women’s health needed and that of her unborn baby would be attended to first.

- Any emotionally upset or distressed women would be given the option of being referred to the hospital counselling service if they chose.

- Women would receive (100-200 Thai-baht/person/interview for their travel expenses to interview.

4) Justice (a group of norms for fairly distributing benefits, risks and costs)

To be fair to all participants and non participants any refusal to participate would not affect their receipt of hospital services in any way.

5.3 Data collection

5.3.1 Sample size

Although in qualitative research, researchers do not know the exact numbers of participants they require in advance until the data are saturated, sample sizes can be approximated based on previous evidence-based practice. Charmaz (2006:114) suggests that “*a study of 25 interviews may suffice for certain projects*”. Others argue that approximately 20-30 interviews are often adequate to reach data saturation (Bryant & Charmaz (2007). The advantage of grounded theory however is that sampling does not cease until saturation occurs – unlike other methods where the sample size is fixed before significant analysis begins.

In this study, finally, 15 women were recruited (10 women were registered-pregnancy women living with HIV in list of ANC including 5 new women who walked- in at the time of data collection). The proportion of women were asked to participate and agreed that was 100% (all women who were asked that all agreed to participate in the study).

5.3.2 Sampling strategy

Charmaz suggests that in grounded theory, the researcher should start with an initial purposive type sampling approach in order to select participants with the right experiences to start the process of data collection and analysis off;

“Initial sampling in grounded theory is where you start, whereas theoretical sampling directs you where to go” (Charmaz, 2006:100).

Further sampling becomes then more theoretical;

“Theoretical sampling means seeking relevant data to develop emerging theory, the main purpose is to elaborate and refine the categories to constitute the theory, theoretical sampling conduct developing the properties of the categories until no new properties emerge”. (Charmaz, 2006:96).

The process of data collection in this study is set out in the following key stages following;

- 1) Scoping the number and identifying initial participants who reach the main inclusion criteria by midwives at ANC and the researcher (detecting the pool of participants). The number of initial participants was 10 women (from list of registered women).
- 2) Selecting the first participant (initial sampling).
- 3) Further sampling by looking for the next key respondent to emerge theoretical categories (Theoretical sampling).

4) At the end of data analysis, 15 women were recruited and saturation was judged to have been reached.

The detail of selecting and recruiting the participants was following:

5.3.3 Inclusion criteria of choosing the participants

HIV positive pregnant women

The inclusion criteria were used to initiate data collection in the study:

-HIV positive pregnant women during pregnancy all Gestational age (GA) and aged above 18 years of age.

-HIV positive pregnant women who know their HIV positive status before pregnancy.

-HIV positive pregnant women willing to be interviewed.

-HIV positive pregnant women who can communicate well without hearing or speaking difficulties.

5.3.4 Process of recruitment

Following approval from the University of Hull and The Ethical Review Committee for Research at Mahasarakham Hospital and Roi-et Hospital, the two proposed research sites in Thailand, the relevant health care staff (midwives and doctors) in the Antenatal Clinic (ANC), were approached to discuss the study and seek their assistance with

recruitment to the study. The staffs were very supportive of the research and were invaluable in helping with recruitment and providing suitable places for the interviews. The following section outlines the steps in the recruitment process.

Recruitment of HIV positive pregnant women

1. Midwives and doctors working in Ante Natal Clinic (ANC) at both Mahasarakham Hospital and Roi-et Hospital identified potential participants using the inclusion criteria.

2. The midwives or doctors initially approached the pregnant women who living with HIV at their routine antenatal appointments, told them about the study, explained why they had been approached, and asked them to consider taking part in the study. Those women who indicated their interest been asked by their doctor or midwife, they were prepared to meet with me so that I could tell the women more about the study and answer any questions they might have. Women had been reassured by their midwife or doctor that they did not have to meet with me and even if they agreed to meet with me that they would be under no obligation to take part in the study.

3. After receiving their normal care, those women who had indicated their interest in participating met with the researcher and were handed them the invitation letter and information sheet to read. At this meeting the women's consent was obtained for the researcher to woman's consent to contact them in two weeks. At this point they were asked again about taking part in the study.

4. Following the agreed two weeks, in which time the women had been able to consider the information about the study and made their decision about whether they wanted to be a part of the study or not, they were contacted about their decision.

5. The women who agreed to take part met the researcher after their second Ante Natal Clinic visit. Prior to interview women signed a consent form.

6. No further contact would have made with any woman who declined at any time to take part in the study. Women were also reassured that their health care would not in any way be affected by their decision to take part or not.

7. For those women who agreed to take part an interview date was agreed at a time and date of the woman's choosing and convenience. Most of interviews took place in a private room at Ante Natal Clinic, although some took place at the woman's home – guided by the participant's preference.

5.3.5 Interviews

Each interview took approximately 60-90 minutes. Interviews were guided by a flexible interview schedule, particularly in the early interviews, however, this was adapted as analysis and theoretical sampling guided the study (Charmaz, 2001). **Table 5.1** shows the interview schedule used. Field notes were also recorded following each interview to record ideas, serve as memos and note any significant non-verbal elements of the interview.

Table 5.1: The interview schedule

Activities	Time frame
➤ Explain the purpose of the study, method and time frame	5-10 minutes
➤ Informed consent	5 minutes
➤ Interview (Example of questions)	60-70 minutes
<ul style="list-style-type: none"> • Pregnant women <ul style="list-style-type: none"> - Tell me about your pregnancy - When did you know your HIV status? How? - Have you revealed your HIV status to anybody? Who? Why? How? - How did you decide to become pregnant with HIV-positive status? <hr/> <ul style="list-style-type: none"> - Who was involved in your decision? - Who was the most significant person in your pregnancy decision? - How did they help you in your decision? - How have others in your family reacted to HIV status and pregnancy? - What are your information sources on HIV? - How did you deal with ...(struggles)..related to become pregnant with HIV-positive status? - How do you feel now? - How do you plan for your/baby's future? 	

5.4 Interview transcribing strategy and transcription quality

After each interview was conducted and recorded, the transcripts were transcribed verbatim and translated by the researcher. An English translator was used to audit the transcripts for accuracy. The following procedures were applied to the translation process – to ensure ethical practice and also to ensure the accuracy of translation, this was guided by the advice of Poland (2001):

- The translator had been briefed on the confidential nature of the tapes and asked to sign a confidentiality agreement.
- The translator had been given the opportunity to debrief with the researcher to express any emotional concerns raised by the process and any technical terms (such as the name of drugs, procedures, lab- testing results).
- The translator had been asked to explain, respond or discuss with the researcher if either they were not clear on any word (s) or meaning (s).
- Transcripts were edited by bilingual translator. Here is an extract of a transcript as an example (See the full transcript in **appendix F**).

Example 1 Tu= Tukta (women) JK= Jaruwan Kownaklai, the researcher

Age of participant:	21 years	Marital Status:	Marriage
Religion:	Buddhist	Occupation:	Housewife
Education level:	High School (Grade 9)		
G2 P1 A0 L1, last child 4 years Baby Gender: Male			

Table 5.2: Transcript's translation from Thai to English

Person	Thai conversation	Dialogue (Translate from Thai to English)
... more in appendix.....
JK.	ท้องนี้ท้องที่เท่าไรคะ	Is it your first, second, or third pregnancy?
Woman (Tu)	ท้องที่สองค่ะ	It's my second one.
JK.	เล่าให้ฟังเกี่ยวกับท้องแรกหน่อยซิคะ	Can you tell me about your first pregnancy?
Woman (Tu)	ลูกคนแรกกับสามีเก่าที่ติดเชื้อด้วยกัน เป็นผู้ชาย ตอนนี้อายุสี่ปี ลูกไม่ได้ติดเชื้อ	I had the first baby with the first infectious husband. I got a son, and now he is 4 years old. But my son is not infectious.
JK.	พอจะเล่าประวัติความเป็นมาตั้งแต่ท้องแรกถึงท้องนี้หน่อยได้มั๊ยคะ ว่าเป็นอย่างนี้	Can you tell the story from the first pregnancy till the present one, and how can it happen?
Woman (Tu)	ได้ค่ะ หนูท้องคนแรกประมาณสิบหกสิบเจ็ดปี ตอนนั้นไปทำงานที่ต่างจังหวัด รู้จักกับสามีคนแรกที่มีลูกด้วยกัน ก็รู้ว่าติดเชื้อคนมีลูกคนแรก พอคลอดลูกได้ระยะหนึ่งก็เลิกกับสามีคนแรก เพราะว่าเขาไปมีคนใหม่ จากนั้นก็มีคนมาสนใจเรื่อยๆ ก่อนมาอยู่กับคนนี้ก็ มีสามีมาแล้วสามคน คนนี้เป็นคนที่สี่ที่หนูอยู่กับผู้ชาย	Yes, I can. I was pregnant when I was 16-17 years old. I worked in the province, knew my first husband, and had the first child together. In addition, I knew that I was infectious when I had the first child. After giving birth for a while, I broke up with him because he had another wife. However there were many men paying attention to me. Before I have been living with a current husband, I got 3 husbands and my current one is the fourth.
JK.	น้องบอกว่ารู้ว่ามีเชื้อตั้งแต่ท้องแรก เล่าเหตุการณ์ให้ฟังหน่อยได้มั๊ยคะ ว่าเกิดอะไรขึ้น	Can you tell me what happened because you said that you knew your HIV+ since the first pregnancy?
Woman (Tu)	ก็รู้ตอนตั้งท้องคนแรกเมื่อสี่ปีที่แล้ว ตอนไปตรวจท้องคนนั้นอายุครรภ์ได้สองเดือน หมอบอกว่าติดเชื้อนี้ แฟนก็คิด ก็กินยามาเรื่อยๆ จนคลอดลูกคนแรก พอลูกออกมาหมอบอกก็ให้ลูกตรวจเลือดผลขึ้นชั้นว่าลูกไม่ได้ติด พอได้เลิกกับแฟนก็กลับมาบ้าน	I knew it 4 years ago. When I checked my first pregnancy , and I was pregnant for 2 months .A doctor said that I and my husband were infectious ;however, I continuously took a medicine. After giving the first baby, a doctor checked my baby and said that he was not infectious. Then I broke up with my husband and came home.
JK.	เล่าความสัมพันธ์กับสามีคนปัจจุบันให้ฟังหน่อยได้มั๊ยคะ	Could you tell me about the relationship between you and a current husband, please?
Woman (Tu)	ก็พอหมอลืมมาอยู่ที่บ้านเกิดก็ได้เจอเขา ไม่ถึงปีมานี้คะ เขารู้จักกับพ่อหนู เขาก็มาเล่นด้วยกับพ่อ ก็เลขเจอหนู แล้วเขาก็มาเรื่อยๆ เป็นคนแสบบ้านนั่นแหละ พ่อแม่ก็ชอบเขา หนูก็ชอบเขา แม่ก็เลยให้อากัน ก็เลขตกลงอยู่กับกัน ไม่ถึงปี ก็มีท้องด้วยกันค่ะ	After I had come home, I met him. It is nearly a year. My current husband had known my father and always visited him. That was the reason why we knew each other. My parents liked him, and so did I. And they agreed that we should live together, so we decided to live together. I was pregnant when we lived together for nearly a year.
JK.	ท้องนี้ท้องที่สองกับสามีคนใหม่คือคนปัจจุบัน มาตรวจวันนี้ อายุครรภ์ได้เท่าไรแล้วคะ ผลการตรวจครรภ์ สุขภาพแม่และเด็กเป็นอย่างไรบ้าง มีภาวะแทรกซ้อนอะไรมั๊ยคะ	This pregnancy is the second one with a current husband, well! How long have you been pregnant, how is mother and child's health, and are there any complications?
Woman (Tu)	อายุครรภ์ได้ห้าเดือนแล้วค่ะ ไม่มีภาวะแทรกซ้อนอะไร หมอบอกว่าสุขภาพเด็กก็ดี แม่ก็ดีค่ะ	My pregnancy is 5 months, and there are no complications. A doctor reports that mother and child's health is very good.

JK.	ตอนทราบว่าตั้งครรภ์รู้สึกอย่างไรคะ	How did you feel when you knew you were pregnant?
Woman (Tu)	คือรู้ว่าท้องก็สะเทือนใจมากค่ะ ตอนนี่รู้ว่าท้อง ตอนแรกก็อยากเอาเด็กออก	When I knew, I felt emotional. At first I wanted to do an abortion.
JK.	ทำไมถึงอยากเอาเด็กออกคะ	Why? Could you explain the reason?
Woman (Tu)	เพราะว่าหนูยังไม่พร้อมค่ะ มันไม่ได้ตั้งใจจะมีคะ ตอนนั้นประจำเดือนหนูขาด หนูก็รอว่าเมื่อไหร่ประจำเดือนจะมา มันก็ไม่มา ก็เลยไปซื้อแถบตรวจท้องมาตรวจ มันขึ้นสองขีด พอเห็นว่าท้องก็พาหนูไปตรวจที่ รพ.	Because I was not ready, and I didn't do it on purpose. At that time, my menstruation didn't show, and I waited for it. I decided to buy a pregnancy test strip, and it showed 2 lines. So my husband took me to the hospital to check it.
JK.	ที่บอกว่ายังไม่พร้อม ไม่พร้อมเรื่องอะไร พอจะบอกได้มีอะไรรึคะ	You said, "I was not ready." What did you mean by this? Could you explain more?
Woman (Tu)	ได้ค่ะ คือหนูไม่อยากจะท้องตอนนี้ อยากรจะมีลูกกับแฟนซักคนนะคะในวันนี้ในอนาคค หลังจากที่ได้ปรึกษาหมอก่อน แต่ยังไม่ทันได้คุยปรึกษากับหมอเลย หนูก็ท้องก่อน	Yes, I meant that I didn't want to become pregnant at that time, I wished to have a child with him in one day after I had consulted the doctor about my planning, but haven't asked them yet, I become pregnant.
...more in appendix.....

Translated transcripts were also sent to supervisors for feedback on interview style and skills – which was discussed during Skype supervision meetings and email feedback.

5.5 Researcher safety

Face-to-face- interviews in a private environment could be risk for researchers, especially when emotive topics were being discussed (Hughes, 2004). To ensure researcher safety a number of measures were taken – based on the work of Zoppi and Epstein (2001):

- *When in the hospital:*
 - These interviews took place in a private room where confidentiality was assured, but where there were people around to call should need arisen.

- *When visiting homes:*
 - Before the interview, the researcher left the name and address of the participant, the expected start and end times of the interview with supervisors by email,
A mobile phone was taken to each meeting and also a mobile panic alarm.
 - In situations where participants lived in remote locations, far away from neighbours and community, the researcher requested at least one other family member of the participant to be in the vicinity of our meeting place (with permission from the participant)
 - After the interview, the researcher let supervisors and/or family member know that all were well.

5.6 The process of data analysis

As discussed in the methodology section – data collection and analysis occur concurrently in grounded theory. Data are gathered and analysed almost immediately. Starting with open codes the theory is built as more data are collected, guided by memos and theoretical sampling. This section describes these processes in a step-by-step way to illustrate how the data collection and analysis process was conducted. It takes the reader right to the penultimate grounded theory described in this study – which is presented and explained in the chapter that follows this one.

5.6.1 Open coding

This section demonstrate the first steps of analysis following Charmaz's (2006) method; open coding, which starts from line by line coding then builds up to focused coding.

5.6.2 Line by line coding

The first step of grounded theory analysis is open coding which starts after reading the full transcription from the very first interview – and continues almost to the end of data collection. Open coding was conducted by naming each line of data that was meaningful with a term that reflected its content. Alongside this process memos were recorded to capture early thoughts about the data and also things to consider following up in future interviews. An example of open coding can be seen in **table 5.3**.

Table 5.3: Line by line coding (examples)

Person	Dialogue from transcription	Line by line code
Woman	<p>Before I become pregnant and he (husband) never known my HIV+, we talked to each other, and he wanted to have a child because he was old, 28 years old. However, in my opinion,</p> <p>I thought that If he had known my HIV+ before, maybe he wouldn't have a child with me.</p> <p>Moreover, I didn't think to be pregnant sooner, but when I was pregnant and I checked.</p>	<p>-Avoiding disclosure to husband before pregnant</p> <p>-Husband intended to have a child talk together</p> <p>-Weighing on husband's acceptance</p> <p>-Accidental pregnancy</p>
Woman (Malee)	<p>Yes, I meant that I didn't want to become pregnant at that time, I wished to have a child with him in one day after I had consulted the doctor about my planning, but haven't asked them yet, I become pregnant.</p> <p>I didn't use or take anything .I used to take birth control pills before, but I experienced a vomiting</p>	<p>-Accidental pregnancy</p> <p>-Not the right time</p> <p>-Contraception</p>

	problem like being allergic to birth control pills. After contraceptive injection, I became fat, so I stopped doing it. My husband wore a condom, but sometimes he didn't do because he didn't know that I was infectious when we firstly lived together.	-Unsafe sex -Avoiding disclosure to husband
Woman (Peungpen)	A nurse at ANC advised me to keep a baby, and the medicines can help me and a child, they should be taken continuously and a baby was less likely to be infectious.	-Health care provider and ARV services -ARV and M-C information
Woman (Panida)	I wanted to tell him, but I was afraid that he would mind. I didn't know how to start while we had spent life together for 3-4 months,	-Fear of disclosure -Difficulties of disclosure to husband
Woman (Aree)	I had already got it HIV positive, and I didn't know how I could do. I couldn't do anything. I thought that "it's my Karma"	-Could not do anything with being HIV+ (unchangeable?) -"It's my Karma"
Woman (Panida)Doing an abortion is the same as killing someone .So, I thought that the baby was in my uterus and I feared the sin to do that.	Fear sin (related to religion belief)

5.6.3 Focused coding

Focused coding is the second step of Charmaz's coding method. For Charmaz, focused coding sees the researcher start to look at the open codes and look for patterns, similarities and links – this process involves many experiments with forming larger codes from the open codes – often seeing the researcher undo codes and reform others. This process also involved the collection and analysis of more data – this saw some focussed codes expanded and some amalgamated (Charmaz, 2006). Table 5.4 provides an example of how open codes were built into focused codes.

Table 5.4: Focused coding (examples)

Line by line code	Focused code
“Unchangeable”	“Unchangeable”
Cannot change HIV positive result	
Feeling forced to accept and no choice first	
Could not do any thing	
“It is my Karma”	“It is my Karma”
It about rule of Karma	
Receiving ARV and treatment information by health care providers	Health care providers and ARV services
Deciding to receiving ARV	
Having a new partner (s)	Concealing HIV positive status
Avoiding HIV positive disclosure	
Pros and con of concealing and disclosing	Weighing on husband’s acceptance to her HIV positive
Try to control and keep it secret as long as possible (controlled)	Avoiding HIV positive disclosure
Husband no doubt	
Avoiding HIV status disclosure Avoiding force husband to wear condom	
Cannot control and keep it secret when HIV status was disclosed (out of controlled)	HIV positive status was disclosed out of controlled
HIV status was doubted by husband	
HIV status would disclose by bigger pregnancy’ gestational age	Semi-controlled
HIV status would be detected by blood screening at ANC service (husband would know this result)	HIV status would disclose Semi-controlled
HIV status was disclosed to husband by nurse at ANC service	HIV status was disclosed Out of controlled

5.6.4 Memos during early analysis

Memos are an important aspect of grounded theory analysis. After transcribing and reading through the full transcription of the first interview coding began as described above – as did making memos as short notes that highlight the important data for further exploration and analysis. Memos included a descriptive text, further investigative questions, signal posts, noticed symbols and diagrams. For example, when open coding about *women and HIV concealing their diagnosis from their husband*, questions in memos were; *When did women who living with HIV disclose their HIV status to husbands? Why did they either conceal or reveal? How different were those women conceal and reveal?; How and what are important factors affecting their HIV disclosure?; How does HIV status concealing plays a role on decision making to become pregnant in those women?*

5.6.5 Theoretical sampling

Initially purposive sampling, as mentioned earlier, was used to select participants. However, as analysis proceeded theoretical sampling was used to explore some of the avenues the data were opening up. Using memos and the constant comparative approach to the data helped guide the seeking out of further participants who may be able to expand on some emerging themes in the analysis. For example, when open coding it was clear that women were, so far, concealing their HIV status from their husbands. This seemed important in their decision making – memos on this required this issue to

be explored more fully in new interviews – and also to seek out women whose husbands were aware of their HIV status in order to explore differences.

5.6.6 Axial coding and category formation

Following the process of focused coding the next step is to start to generate Axial codes (Charmaz, 2006) – although Charmaz argues that this step is optional in theory building, if the data are strong and available it is a helpful step in developing a constructivist grounded theory – providing the framework for researchers to generate a conceptual model (Charmaz, 2006). Axial coding relates categories to subcategories, specifies the properties and dimensions of a category and recruits the broken data from focused coding to emerge analytic concept (Charmaz, 2006:60).

Table 5.5 illustrates the selected coding as the results of axial coding in this study. This part of the analysis is similar in principle to focused coding. The researcher looks for links and places focused codes in to larger axial codes which describe linked elements of processes. As with focused coding, axial coding sees many iterations being tested and rejected before the complete process, as in **table 5.5**, is arrived at. In this step of the analysis 6 categories were produced and selected from the axial coding.

Table 5.5: Category 1 (Concealing HIV positive status from husband)

Focused code	Axial coding	
Weighing on husband's acceptance to her being HIV+	Weighing/Balancing Pros and cons of concealing	Concealing HIV positive status (concealed and disclosed)
Weighing Pros and cons of concealing		
Weighing on husband's acceptance to her being HIV+	Concealed	
Avoiding HIV disclosure		
Difficult to tell		
Controlled concealing (being under concealed)		
Weighing on husband's acceptance to her being HIV positive	Disclosed	
Acceptable of infected causes		
Strong relationship to husband		
Out of controlled (Disclosed)/ Being suspected		
Fears of negative results	Fears	
Fears of stigma		
Fears of the future		

Table 5.6: Category 2 (Desire to have a child)

Focused code	Axial coding	
Husband's acceptance to her being HIV positive	Significant persons to have a child	Desire to have a child
Husband's wanting to have a child		
Self wanting to have a child		
Other family member's wanting to have a child		
Husband's wanting a child	Reasons to have a child	
Motherhood		
ARV effectiveness		
Mother to child transmission(less)		
Seeking ARV information	Seeking information	
Seeking MTCT information		

Table 5.7: Category 3 (Becoming pregnant)

Focused code	Axial coding	
Plan for pregnancy	Planned pregnancy	Becoming pregnant
Wanting a child		
Timing (right time)		
Disclosed HIV positive status before becoming pregnant		
Leaving contraception		
Accidental pregnancy	Unplanned/Accidental pregnancy	
Timing (not right time)		
Mistake contraception		
Missing contraception		
Concealed HIV positive status before becoming pregnant		
Unsafe sex	Contraception and information	
Contraception using		
Unsafe sex due to HIV+ concealing		
Information (insufficient)	Fears	
Fears of negative results from HIV disclosure		

Table 5.8: Category 4 (Keeping or terminating pregnancy)

Focused code	Axial coding	
Fear sins	Keeping pregnancy	Being ambivalent on pregnancy decision (Keeping or terminating pregnancy)
Keeping pregnancy		
Weighing on husband's acceptance to her HIV positive		
Weighing on husband's acceptance to pregnancy (baby)		
Motherhood		
Bonding		
Weighing on husband's acceptance to her HIV positive	Terminating pregnancy	
Weighing on husband's acceptance to pregnancy (baby)		
Doing abortion		
Issue of pregnancy disclosure	Telling or not	
Telling or not telling being pregnant		
Illegal abortion information	Information	
ARV information		
Fears of sins	Fears	
Fears of baby infection		
Fear of the future		

Table 5.9: Category 5 (Accepting a decision)

Focused code	Axial coding	
Accepted of being HIV positive women with pregnancy	Accepting consequences of pregnancy and HIV disclosure	Accepting a decision
Accepting pregnancy and consequences		
Accepting HIV disclosure's results and consequences		
Accepted a baby	Wanted pregnancy	
Wanting pregnancy		
HIV screening at ANC	Crisis point of HIV disclosure	
HIV+ status was revealed at ANC		
Out of control		
Maternal services	ANC supports	
ANC supports		
Information		
Couple/ partner support	Couple and family supports	
Family supports		

Table 5.10: Category 6 (Adapting to their decision)

Focused code	Axial coding	
Rule of Karma/ "It's my Karma"	Adapting to self	Adapting to their decision
Something wrong or mistake in the past		
Positive thinking	Adapting to a baby/pregnancy	
Motherhood		
Bouding		
"What will be will be", "let it be"	Adapting to the relationship to husband	
Preparing for delivery	Preparing for delivery and the future	
Preparing for the future		
Information		
Adapt to Fears		

5.6.7 A substantive model emerging

This section will describe how steps were taken towards developing a substantive model of HIV and pregnancy decision making in this study, it will describe the process, present the penultimate framework of decision making to set the scene for the detailed and in-depth presentation of the complete grounded theory in the following chapter.

In developing a grounded theory the researcher must always keep in the main research question and objectives of the study; how women who living with HIV decided to become pregnant and what is the process of decision making throughout their pregnancy and have a child in a Thai context. The grounded theory analysis process allowed the emergence of 6 key categories in that process – and further analysis and reflection on memos and notes during the analysis led to efforts to develop and expand these categories into a conceptual model. This firstly led to the development of the process as a linear model– the grounded theory process enabled the researcher to place the categories of decision making into a longitudinal type diagram – the categories represent stages in the pregnancy process. Following this, further analysis also allowed the decision making issues related to each of these stages to be defined – along with attempts to describe an overall ‘process’ by which women navigate this journey.

Developing a substantive model is actually an iterative ‘messy’ process in practice. The model presented here is the result of numerous attempts to describe this process – diagrams and models that were tried, modified, rejected and refined. Field notes and diagrams can illustrate this process. In the penultimate stages of analysis a ‘skeleton’ model of the decision making process was arrived at. There were still question marks (?) attached to sections related to factors driving the decision making process. **Figure 5.2** represents the penultimate model from this analysis;

Decision making process to become pregnant in Thai HIV+ women (developing process)

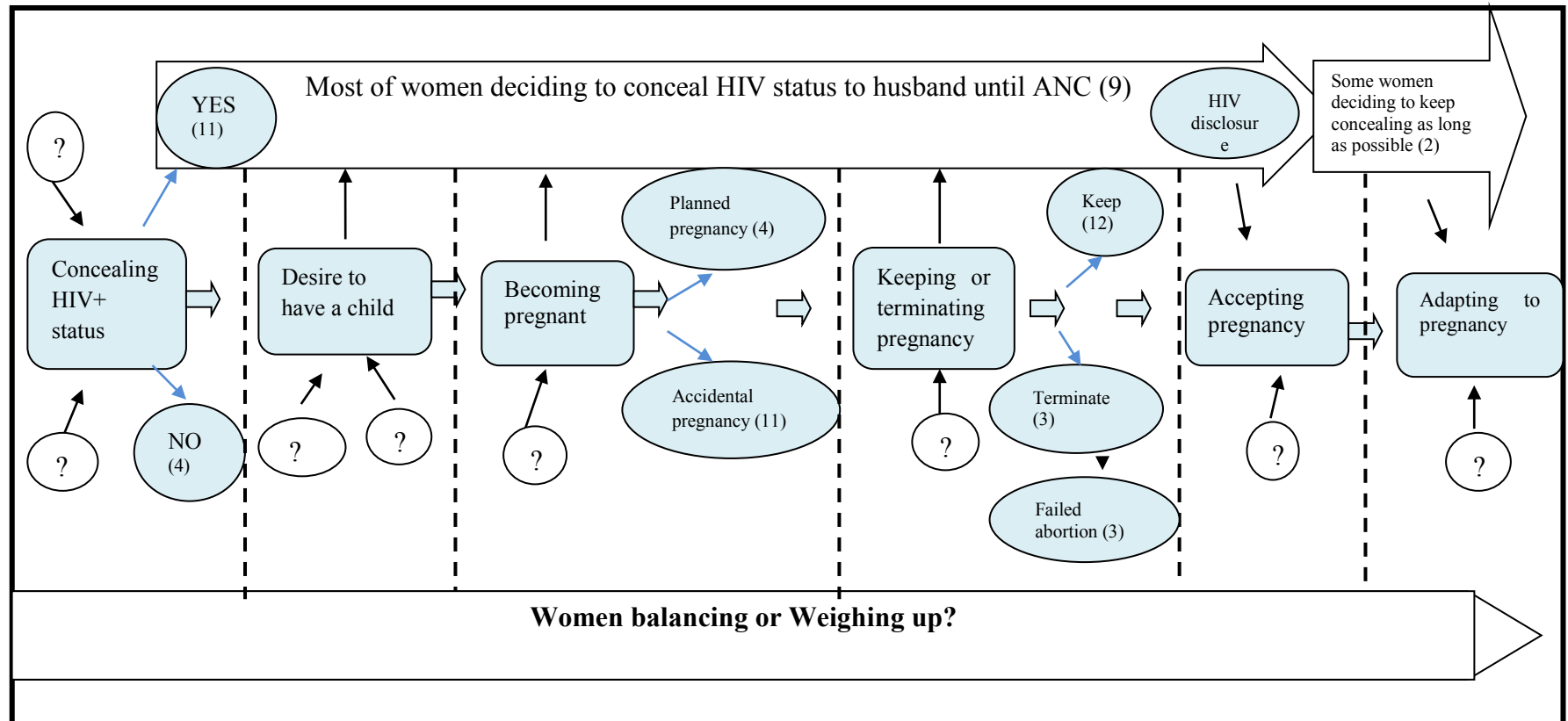


Figure 5.2: A substantive model developing

5.6.8 Constant comparative method (CCM)

A vital element of grounded theory analysis is the process of constant comparison. This analytic step compares the similarities and differences between categories from case to cases in order to reach theoretical saturation and a solid, complete conceptual model of the social process under investigation. This occurs alongside all data analysis in grounded theory - but is also important in later stages when constructing a conceptual model/grounded theory. Using the 6 categories from Axial coding the constant comparative method was used to check and compare the data supporting each category – asking the main question; *“How different and similar were the concerns and decision making processes to become pregnant?”*

For example, one coding was about *Concealing HIV positive status from husband*, constant comparison allowed the researcher to explore the differences and similarities (properties and dimensions such as time of concealing, reasons, why concealed and why not?). As a result, 2 sub-types or sub-categories emerged of concealing: early disclosure and concealing.

This process is illustrated in **table 5.11**.

5.6.9 Data saturation

Bryant and Charmaz (2007) describe that researchers know when they have reached saturation when they hear nothing new from the data and they are also satisfied the categories are robust and well supported by the data. This study reached this point around 12 interviews – although additional ones were conducted to test this – after 15 interviews no new codes emerged. At the end of interviewing 15 participants, the researcher was satisfied and ceased data collection as it was clear that the categories developed were strong and well supported by the data – and that the theoretical explanation of the process of pregnancy decision making that these women living with HIV had undergone was robust and complete.

5.7 Rigour of Charmaz

Charmaz (2006) proposed that the rigour of a grounded theory can be tested by two approaches. One is to ask a series of question of the final theory as to its applicability and how it has addressed the research question, what contribution it makes to our understanding etc. These questions will be addressed and answered in the final chapter of this thesis. However, Charmaz also suggests some methodological criteria by which the rigour of a grounded theory can be addressed – base around 4 domains; Creditability, originality, resonance and usefulness. To address these it is proposed that this study used several methods to establish trustworthiness:

- Using the constant comparative method for creditability and originality. When there is a strong combination of creditability and originality then the resonance will be increased, because creditability and originality increases resonance (Charmaz, 2006).
- Using purposeful sampling and theoretical sampling for transferability.
- Using a bilingual translator to double check of bilingual transcriptions for originality and dependability.
- Using member checking by presenting emerging findings to participants and clinicians caring for women living with HIV.
- Using peer debriefing (academic supervisors) for creditability and dependability.
- The substantive model reflects ‘usefulness’ in Charmaz’ guidelines.

Importantly, the researcher also believes that the grounded theory process itself reinforces the trustworthiness of the final model as the techniques of theoretical sampling and concurrent data analysis and collection lend the design of the study extra credibility over other qualitative approaches.

5.8 Conclusion

This chapter has described manner in which the methodology was put in to practice in the field. It set out the practical steps used recruit participants in an ethical manner and described how interviews were used to collect data. It then sets out – with examples – the various stages of the grounded theory process towards the development of a theory

that addresses the research questions guiding this study. It also provides practical examples of how the issues of rigour outlined in theory were put into practice in the field. The various steps in the data collection and analysis process are summarised in **figure 5.3**:

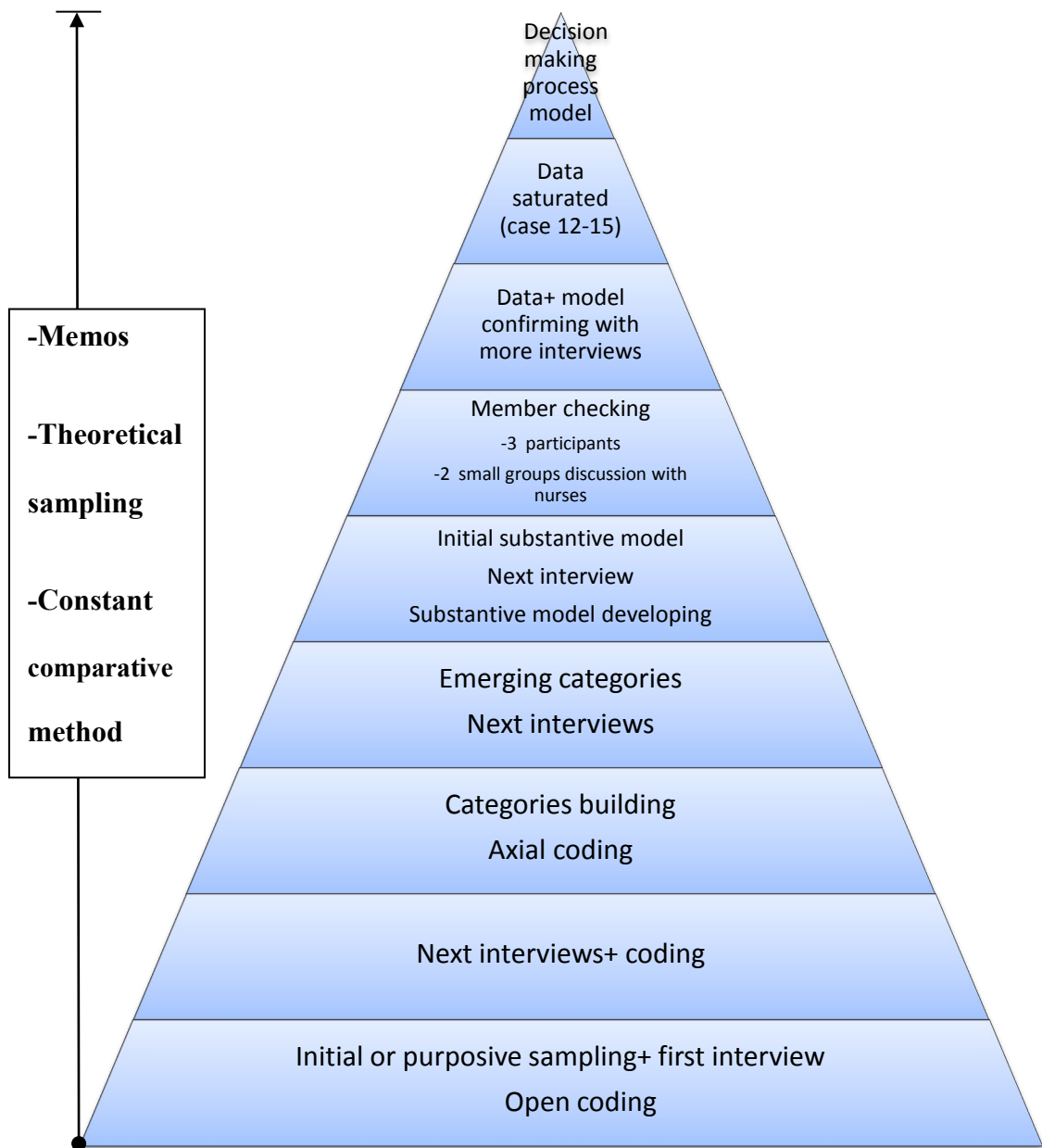


Figure 5.3: Data collection and analysis processes

This figure summarises the process of gathering and analysing data in this study up until the final stages of the analysis. The complete grounded theory will be presented in the following chapter.

Chapter 6

Findings

This chapter presents the findings of the study. Firstly the role of the researcher in constructing the theory will be illustrated and presented. Following this the final grounded theory and the development of “the core category” as the overarching process of “balancing” will be presented and discussed as the key process by which women make their pregnancy related decisions. The chapter will then present demographic information for the participants and will then set out, in detail, using paradigm extracts from the data, the 6 categories that make up the final grounded theory model.

The following covers how the findings will be presented;

6.1 The role of the researcher in constructing a final theory

6.2 A substantive model: Pregnancy decision making process in Thai women living with HIV

6.1.1 The core category: “Balancing as a process to manage the pregnancy decisions”.

6.2 Demographic data of participants

6.3 Concealing HIV positive status from husband

6.4 Desire to have a child

6.5 Becoming pregnant

6.6 Keeping or terminating pregnancy

6.7 Accepting a decision

6.8 Adapting to their decision

6.9 Conclusions

6.1 The role of the researcher in constructing the final theory

In constructivist grounded theory of Charmaz the researcher is considered as a part of processes of data collection and analysis rather than being above the data or phenomenon (Charmaz, 2006). Categories and models emerge and are constructed from the interpretation of both the participants and the researcher (Charmaz, 2006). In this study, although the elements of the 6 categories of pregnancy decision making were expressed by these women, the findings were interpreted, determined and shaped by my clinical experience in the field of HIV maternity care in a Thai context. Although my principal position in the field was as the researcher, my other background as a nurse and midwife working with people and women living with HIV helped me to understand the women's experiences in a more contextual manner. My clinical experiences also helped me to be theoretically sensitive to pregnancy decision making from the participant's viewpoint, it also helped me in writing memos and field notes - extending my ability to refine, define and develop the categories to become a substantive model.

6.2 A substantive model: Pregnancy decision making process in Thai women living with HIV

The product of this study is the model; “Pregnancy decision making process in Thai women living with HIV” (**Figure 6.1**). It presents the decision making process in a chronologic manner – and linking this to key aspects of the decision making process.

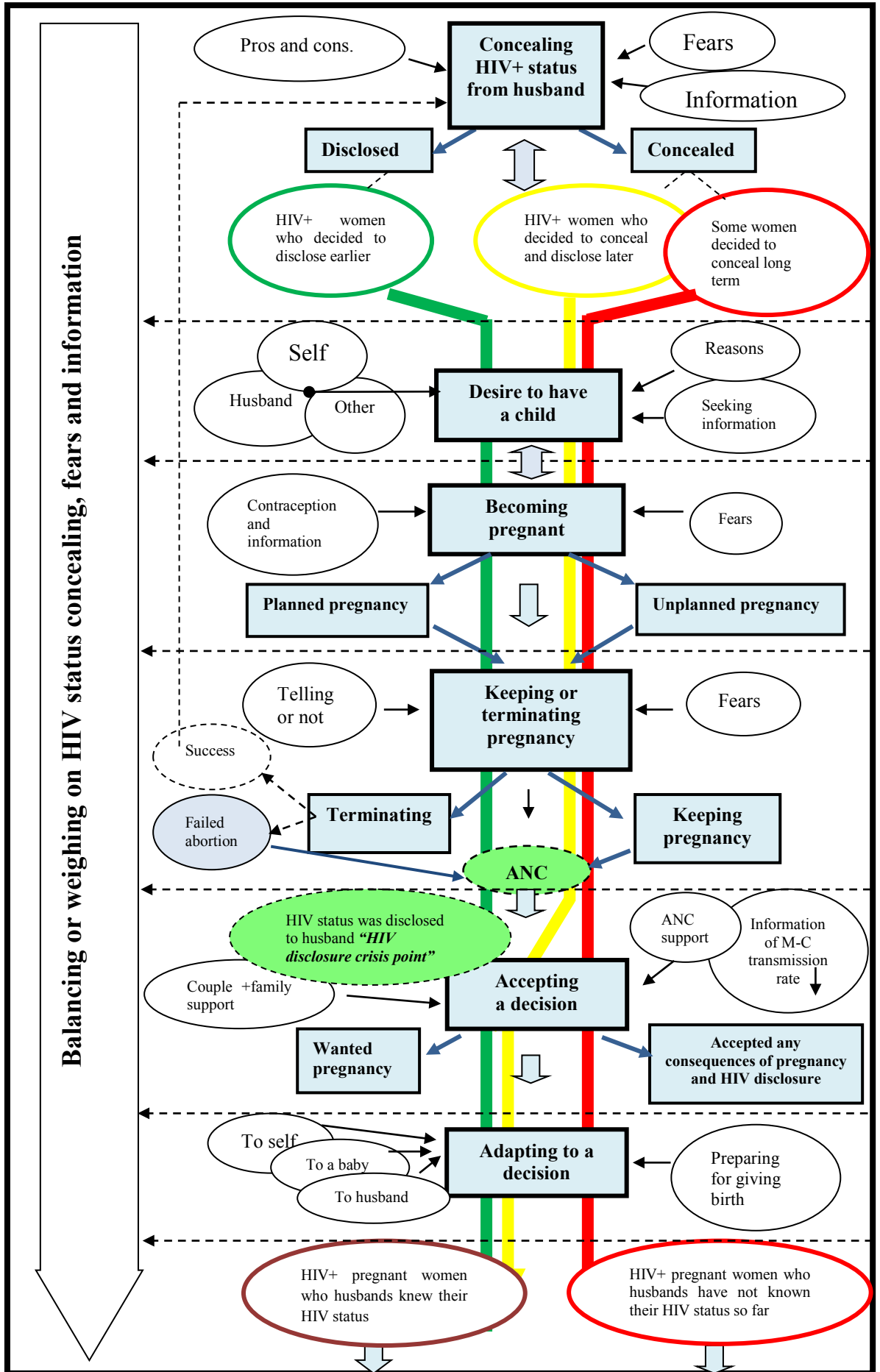


Figure 6.1: A substantive model

The data in this study reveals the complexity of the decision making process affecting these women. The above model consists of 6 categories as part of the decision making process.

Concealing HIV positive status is a thread throughout the process, together with fear and information and all play a significant role in each stage of decision process. Living together with their current husbands, most of whom were unaware of the women's HIV positive status at the beginning. Disclosure of HIV status to husband seemed very difficult for all the women. Regarding the decision to disclose or avoid disclosure, women were divided into 2 groups; disclosed and concealed. Most of them decided to conceal their HIV status during the early time of them living with their husband, they feared that disclosure would lead to them being abandoned by their husband. HIV status concealment and a lack of contraceptive knowledge were the main causes of unsafe sex and becoming pregnant. As a result, this 'unplanned' pregnancy created a ***“crisis point of HIV disclosure to husband”***, this situation came from HIV routine screening at ANC to women who living with HIV and their partner, at this point women felt a ***“loss of control”*** about their status and some felt they then needed to reveal their HIV status to their husband. However, there were some women who decided to reveal their HIV status to husband before pregnancy, these women faced the crisis of disclosure less than the concealed HIV status group of women because they felt that their HIV status would be more acceptable to their husband because of how they had acquired the virus – for example, from their own mother or from their current husband.

All of women in the study intended to have a child at some point in their lives (after their HIV diagnosis) but most of them became pregnant earlier than they expected (unplanned pregnancy).

In this study, although all of women planned to have a child one day most of them did not plan for this pregnancy at this precise time – although they knew it was a possibility. Only 4 women had planned and prepared to become pregnant at this specific point in time (planned pregnancy) while most of women had “unplanned/unexpected/accidental pregnancy”.

The model presented on **figure 6.1** provides a diagrammatical depiction of the decision process and the elements within it. The following section explores those elements in more detail and also explains how they are linked.

Concealing HIV positive status from husband and desire to have a child

Concealing HIV positive status from husband:

Women would weigh if they should tell their husbands about their HIV status - evaluating the pros and cons of concealing or revealing. For example, if women told their husbands that they were infected, what would happen? If they did not tell their husbands, what would happen? For the women who concealed their HIV status, they had evaluated that the results would be negative if they told their husbands. Such negative results included fears of abandonment, reproach, contempt and an unstable/unpleasant future. This weighing and balancing also included the fear of negative reactions from others such as stigmatising, accusations of sexual promiscuity

and discrimination. Furthermore –the HIV positive concealing groups of women were actually divided into 3 sub-groups; deciding to disclose earlier (before pregnant), deciding to disclose later (after becoming pregnant) and deciding to conceal for the long term (see model in figure 6.1).

Desire to have a child:

A key element to the decision making process was the fact that all the women wanted a child – at some point. Importantly, women revealed that their husband was the most significant person influencing the wanting a child decision. In many cases, of course, this desire of their husbands was based on their ignorance of their wife's HIV positive status. Another issue that drove the women to become pregnant was the information they received about lower rates of mother to child transmission and ARV effectiveness from health care providers, the internet, and, with some women, their own experience of having HIV negative children in the past.

Becoming Pregnant and ambivalent pregnancy decision

Becoming Pregnant:

The category of becoming pregnant divided women into 2 groups: planned or unplanned pregnancy. For unplanned pregnant women, most of those women become pregnant because of a lack of contraceptive knowledge and practicing unsafe sex. Another important cause of unplanned pregnancy was that their partners did not put on condoms while having sex intercourse. Because they were avoiding disclosing their HIV positive status, many women did not ask their husbands to wear condoms. The

women revealed that, if they asked for condoms to be used their husbands may become suspicious of their HIV positive status. In the group of women who did disclose their HIV status to their husband before becoming pregnant, they discussed their disease, their desire for a child, and low mother to child transmission rates with their husband. After this discussion and acceptance by her husband, these women ceased using contraception and became pregnant.

Keeping or terminating pregnancy

Despite women intended to have a child and planned to become pregnant, being ambivalent between keeping and terminating unborn babies happened in all participants. It was during “*an ambivalent pregnancy stage*”, that many women were in two minds about continuing the pregnancy or having an abortion.

Among women who decided to continue their decision was impacted by their religious beliefs; fear sin(s), they believed that doing an abortion was a serious sin; furthermore, Buddhists believe that doing an abortion is killing a child or a person in another way. According to the law of Karma, this will have a heavy penalty for the person and will show its results in this world or the next one. Therefore, some women with HIV positive status were afraid of doing an abortion.

Some women did decide to have an abortion, driven by fears related to their husbands finding out their HIV status. The women then sought an abortion in an illegal clinic. These women saw an abortion as the way to eliminate any problems related to HIV disclosure. However, in these women in this study – the abortion attempt failed and they subsequently continued with their pregnancy.

Accepting a decision and adapting to their decision

Another stage of the decision process that all women reached at one point or another via different paths was; the ultimate acceptance of being pregnant. Women went to the hospital and ANC to confirm their pregnancy and receive antenatal care. At the ANC, all women had HIV screening. Once their HIV status was confirmed by staff they were advised to take their partners to take HIV testing. At this point women again felt that their HIV positive was getting *“loss of control”*, and that this clinic visit and advice meant it was time to tell their husband - themselves or by nurses in the clinic. This stage again made the women think about the consequences of disclosure.

Surprisingly, although this process was a crisis point, after disclosing their HIV status all women received positive supports from husbands, family members and health care providers especially, an acceptance from their husband – helped by the support provided by the ANC nurses. Women then used *“Karma”* and *“something wrong or missing in the past”* to manage their thought and fears, they adapted to a baby in their womb with positivity and motherhood. They also adapted to their relationship with the husband by thinking *“what will be, will be”* and *“let it be”*.

For the women who still did not disclose (Panida and Peungpen), the core processes of decision making were very similar to women who had revealed their status to their husband. However, there were some different points in ‘accepting the decision’ and ‘adapting to their decision’ categories. The data from interviews found that at ANC was not a crisis point of HIV disclosure for these two women, they had already decided that they would not tell their husband anyway and that they believed they could control

their secret. They would try to control this by not involving their husband in the pregnancy at all - including not taking them to the ANC services.

“I think to tell him so, but not yet, I may raise my children until they grow enough .At that time in the near future, I may let him know if he should decide to leave me, I would let my child alone. But absolutely not this time, I’m afraid that my family will be broken...Just keep life going on, say nothing about infection, I could keep it secret as long as possible” (Panida 22 year-old)

“Nurse at Clinic (ANC) asked me bringing my husband to have screening test but I said “no, not yet” and I never accompanied him with me going to Clinic. He needed to work also.Yes, I thought about it, if I tell him he leaves me, I’ll be in a trouble” (Panida)

“I have thought about it, I would tell him in the future but not yet,... I think ...sometime we would know each other secret but we don’t to talk about it” (Peungpen)

In terms of the ‘processes of accepting a decision’; these 2 women would accept the potential consequences of their pregnancy, like the women who disclosed, but they also accepted the potential consequences of concealing their HIV status from their husband. They realised that the consequences of concealing would be such as their husband would know one day in the future, and the husband may also be infected with unsafe-sex. These two women (Panida and Peungpen) had weighed and balanced the pros and cons like the other women, but unlike them they decided to keep their HIV status secret.

“It’s not sure about who I got HIV from. Yes, it might be from this husband because he told me about his play boy behaviours and didn’t wear condoms when having sex with some sex workers. However, I don’t care too much whoever I got HIV from. I just think that we are now living together, what will be will be,... It is as normal, we have no used any condom until I became pregnant..... May be, I will take about it but not this time. Now I feel better, less worrying. Last time I had worried about disclosure to relatives, I afraid they

would ask me about a baby. Now, I have some answers to reply them. I would say “I’m aneamia, I can’t feed a baby my breast milk” (Peungpen)

Some women did not disclose at this point – so within the model there were 2 groups of women; pregnant women whose husbands knew her HIV status and still supported them and pregnant women whose husband still did not know her HIV status and were still supporting her pregnancy.

6.3 Core category

This section will describe what the core category is and come from and how I developed the core category.

The core category is the theoretical concept which is in the central aspect of the grounded theory which incorporates and connects the categories (Charmaz, 2008, 2014). In this study the core category is the main processes by which the participants move through their pregnancy journey and is presented as “**balancing**”. This process is evident the whole journey, for example, in early coding a key main concern and problem for the women was “*concealing HIV status and try to control it*” Whether women chose to conceal or reveal their HIV status involved them balancing their decision on “*feeling fears to the cons of HIV disclosure and insufficient information*” in the early stages of their relationship with their husband so most of them (11 women) decided to hide their HIV status first rather than disclose. In each step of the decision process “balancing on concealing HIV status, fears and information” was evident as the core essence of the way women navigated their pregnancy journey. (See **Figure 6.2 and Table 6.1**).

To summarise, the central process of *balancing* - the manner in which women weighed the consequences of each decision they took as part of the pregnancy process was the core – central – category in the grounded theory of pregnancy decision making in this study. This process played a significant role of each category as shown in **Figure 6.2** and **Table 6.1** below.

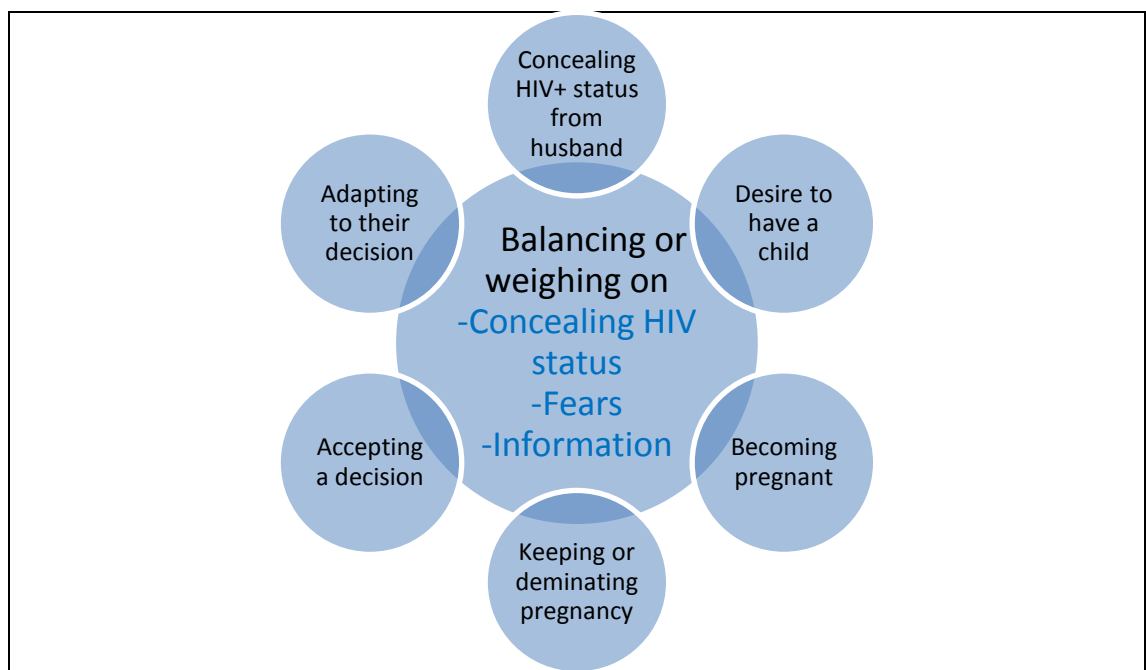


Figure 6.2: The core category is the central of pregnancy decision

Table 6.1: The relationship between balancing and 6 categories

Fears	Concealing HIV status related to 6 categories	Information
-fear husband know -fear husband will not accept her HIV status -fear stigma from social and husband	Concealing HIV + status from husband	-disease stigma and discrimination
-fear husband not desire a child if know her HIV status -fear husband not accept herself and a baby	Desire to have a child	-Mother to child transmission -ARV information
-fear husband know her HIV status because of getting pregnant -fear baby would be infected	Becoming pregnant	-contraception -unsafe sex -lack of knowledge and information
-fear sins if do abortion -fear husband know HIV status -fear baby would be infected -fear relationship with husband will be broken -fear husband will abandon -fear issues related income and money -fear the future	Keeping or terminating pregnancy	-abortion information -Mother to child transmission -ARV information -information from ANC
-less fears but fear baby will be infected	Accepting a decision <i>“Concealing out of control”</i>	-counseling from ANC -Mother to child transmission -ARV information
-adapt to fears	Adapting to a decision	-Pregnancy care from ANC -Mother to child transmission -ARV information -Delivery information -Baby care information

From table 6.1, we can see the relationship between fears, HIV concealing and information within 6 categories, summarise as the following.

- **Fears**

Fear was the most significant feeling within the women since starting to live with their husband, becoming pregnant and during their pregnancy. Before becoming pregnant 11 women decided to conceal their HIV positive status because of fears such as; they feared their husband would not accept their HIV status, fear their husband would not intend to have a child, would not accept a baby and fear of stigma and discrimination from society and husband. They were also afraid that by a baby becoming infected, their husband would know their HIV and her husband would abandon them. They also had fears about the consequences of an abortion – socially and also in relation to their beliefs.

- **Concealing HIV positive status from husband (controlling)**

Of 11 women chose to conceal their HIV status from their husband at the beginning of living together, they tried to keep their HIV status secret as long as possible until they could not control the information any longer. This element seems to be about retaining some control over their lives and also about control over their decisions relating to pregnancy. They had to balance these fears against the knowledge that they must, ultimately disclose their status. Women responded to this differently, and disclosed at different stages – however, this seemed always related to the desire not to lose control of their situation.

- **Information**

In this study, information was a key aspect upon which women based their decisions. Information could have a positive effect – such as information from health professionals or other reliable sources of HIV information. This type of information reduced fears and supported women in keeping and accepting their pregnancy. In contrast, negative or incorrect information could increase fears and contribute negatively to the decision making process, for example receiving information such as concealing HIV status from a partner was the best choice, having an illegal abortion being the answer, and that continuing with unsafe sex behaviour to conceal HIV status. This seemed connected to some women not getting enough information on contraception, safer sex and pre-marriage counselling for women who living with HIV or their partner.

6.4 Demographic data of participants

This section reports the demographic data of the 15 participants in the study table below. This information is shown in **table 6.2** below.

Table 6.2: General demographic data

Pseudonymous name	G ¹² -P ¹³ -A ¹⁴ -L ¹⁵	Age	Marital status	Religion	Education	Planned/ unplanned pregnancy	HIV caused	HIV disclosure	Partner's HIV status
1.Panida	G ₂ P ₁ A ₀ L ₁	22	Couple	Buddhist	Grade 12	Accidental/ Unplanned	Sexual (from one of partners)	None	unknown
2.Peungpen	G ₄ P ₃ A ₀ L ₃	25	Couple	Buddhist	Grade 8	Accidental/ Unplanned	Sexual (from one of partners)	None	unknown
3.Uraiwan	G ₃ P ₁ A ₁ L ₁	21	Couple	Buddhist	Grade 12	Accidental/ Unplanned	Sexual (from ex-partner)	Family and husband	Negative
4.Kanchana	G ₁	19	Couple	Buddhist	Grade 12	Planned	Mother (MTCT)	Family and husband	Negative
5.Aree	G ₂ P ₁ A ₀ L ₁	36	Couple	Buddhist	Grade 12	Accidental/ Unplanned	Sexual (from ex-partner)	Husband at ANC	Negative

¹² G:Gravidity = number of pregnancy¹³ P:Para= number of baby birth¹⁴ A:Abortion= number of successful abortion¹⁵ L:Living child= number of living child

Pseudonymous name	G-P-A-L	Age	Marital status	Religion	Education	Planned/unplanned pregnancy	HIV caused	HIV disclosure	Partner's HIV status
6.Buraya	G ₁	19	Couple	Buddhist	Grade 9	Planned	Mother (m-c)	Family and husband before pregnant	Negative
7.Tukta	G ₂ P ₁ A ₀ L ₁	21	Couple	Buddhist	Grade 9	Accidental/Unplanned	Sexual (from ex-partner)	Husband at ANC	Negative
8.Napat	G ₄ P ₀ A ₃ L ₀	33	Separated	Buddhist	Grade 12	Accidental/Unplanned	Sexual (from one of partners)	Mother and husband	unknown
9.Malee	G ₃ P ₁ A ₁ L ₁	29	Couple	Buddhist	Grade 12	Accidental/Unplanned	Sexual (from current-partner)	Husband before pregnant	Positive
10.Hom	G ₂ P ₁ A ₀ L ₁	33	Separated	Buddhist	Grade 9	Accidental/Unplanned	Sexual (from one of partners)	Husband after pregnant	unknown
11.Navarat	G ₂ P ₁ A ₀ L ₁	30	Widow	Buddhist	Grade 9	Accidental/Unplanned	Sexual (from current partner)	husband	Positive
12.Muay	G ₂ P ₁ A ₀ L ₁	22	Couple	Buddhist	Grade 12	Accidental/Unplanned	Sexual (from ex-partner)	Husband at ANC	Negative
13.Lew	G ₄ P ₀ A ₃ L ₀	23	Divorced	Buddhist	Grade 9	Planned	Sexual (from ex-partner)	Husband at ANC	Negative
14.Aonicha	G ₃ P ₂ A ₀ L ₂	36	Couple	Buddhist	Bachelor	Accidental/Unplanned	Sexual (from partner)	None	unknown
15.Sai	G ₂ P ₁ A ₀ L ₁	24	Couple	Buddhist	Grade 9	Planned	Sexual (from current-partner)	Husband before pregnant	Positive

From **table 6.2**, the 2 youngest participants were 19 years old having their first pregnancy. 7 out of 15 women were 20-25 years old, and 6 out of the 15 women were more than 30 years old. 7 out of the 15 were on their second pregnancy, 3 out of 15 on their third pregnancy and 3 out of 15 on their fourth pregnancy.

All 15 women were Buddhist. Most of them (11 out of 15) were holding a marriage status and living with their current husband. Of 7 women had finished a secondary school, with one woman holding a bachelor degree.

6 out of 15 women had prior experience of having an abortion in previous pregnancies, 2 of them had illegal abortions more than one time. For 3 out of these 6 women the failed abortion in this study was their first experience of abortion in this pregnancy (Aree, Tukta and Malee)

13 out of 15 women got HIV from sexual intercourse and 2 out of 15 got HIV from their mother. Receiving HIV through sexual intercourse, 6 out of these 13 women claimed that they got HIV from ex-partner and could identify which one they got HIV from, the other 4 out of 13 women knew that they got HIV from one of partners but they did not intend to identify them, the last 3 of 13 women got HIV from their current husband (Malee, Navarat and Sai).

4 out of the 15 women had revealed HIV status to husband earlier before getting pregnant, 9 out of 15 women had revealed after getting pregnant at ANC services and 2 (Panida and Peungpen) out of 15 women were still keeping their HIV secret from their husband at the point of interview.

The next section of this chapter presents, in detail each category, sub-categories and the relationships within them – using paradigm extracts from the interview data.

6.5 Category 1 “Concealing HIV positive status from husband”

Concealing or disclosing her HIV positive status was a clear finding from the data. Most of the women (11 out of 15) did not tell their husbands about their HIV before becoming pregnant. 4 women did reveal this to their husband before getting pregnant. In terms of making this decision there were 3 factors involved; fears, pros and cons of concealing and ART information as show as figure 6.3.

Within this category there were 2 sub-categories; women’s *deciding to conceal* and *deciding to reveal*, and there were 3 factors that affected to this decision; fears, pros and cons of concealing and ART information as show as **figure 6.3** below.

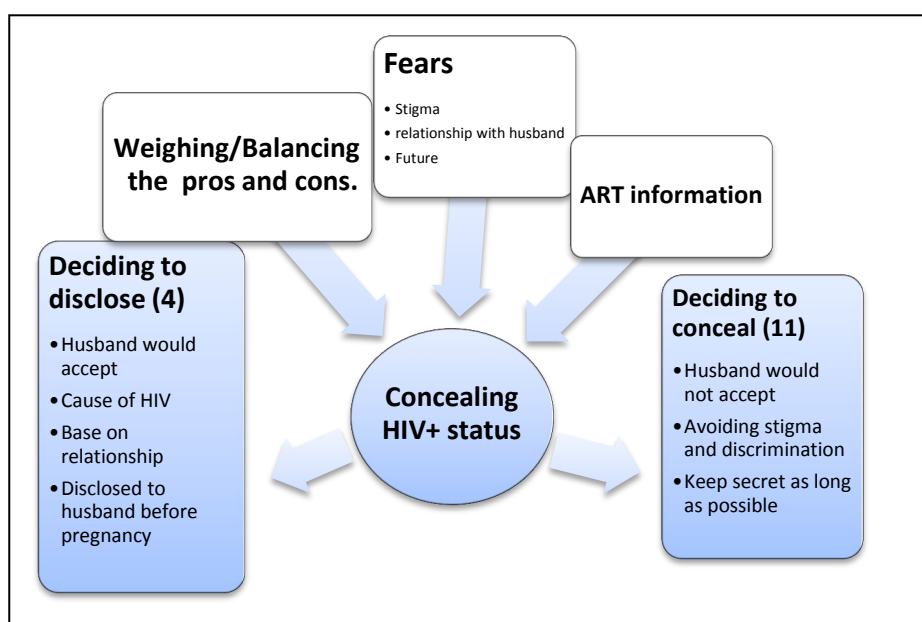


Figure 6.3: The relationship in category 1

6.5.1 Women who disclosed HIV status (before pregnancy)

There were 4 women who disclosed their HIV status to their husband before pregnancy (Kanchana, Buraya, Malee and Sai). In terms of what affected their decision to do this – a number of issues seemed important.

1. Cause of HIV infection would be accepted by her husband

Women said that they decided to reveal their HIV status to their husbands earlier because they had evaluated that their husband would accept it and be sympathetic. This was as a result of their belief that acquiring HIV from their own mother or from their current partner would result in this type of reaction from their husband;

“Yes, I could. My partner is 23 years old, and we made friends with each other before my pregnancy. At first, I didn’t tell him that I was infected, but I told him before my pregnancy.....At that time, I had had a good relationship with him for more 2 years, I loved him and I thought so did he. I knew later that he had known and doubted on me when he saw me took medicines usually. At first, I told him that I took anaemia drugs, he would not believe my reason. One day, I decided to tell him about my HIV status, because he asked whether I had something to tell him. He said, “It seems you have something in mind, and you are worried.” When I heard his asking, I cried and I told him. I told him that I got this disease, and I got it from my parents when I was born. He showed nothing. He told me that “never mind”. I asked him if he’d like to leave me after he had known. He replied, “No, I don’t leave you.....” (Kanchana)

“At that time, when I told him about my HIV positive, he was quiet a minute and could not say anything, he could not believe it. He asked me that “How was it happened? How did you get this disease? I replied him that I’ve got it from my mother since I was born. I was not a playgirl and having sex with many guys, he knew me well. Later, he sympathised me he told me that “Never mind if you got infection from your mother, you had no choice”. I was happy to hear that. Then we desire to have one child together..... ” (Buraya)

“I told my husband because I got HIV positive from him. He never knew HIV+ before, he knew first time when he been in hospital to have an arm operation. After telling his HIV+ by a doctor, the same doctor requested me to take blood testing, then I knew that I was infected” (Malee 29 year-old)

“Many years ago, my husband was infected first, the doctor advised me to take blood for HIV testing, the result was negative then the same doctor asked me to take seriously thinking about living with him because he was HIV positive but I replied to doctor, I would not leave him because we love each other. One year later, I was infected when I was being pregnant the first child....we were sad just a few week but we were happy to have and looked after each other.....” (Sai 24 year-old).

2. Having a good relationship with husband

All of the 4 women who disclosed have been living with their current husband between 1 and 10 years, they had a strong relationship together which was another reason given for disclosing HIV status. Women expected and predicted that their husband would accept and not leaving them after disclosure;

“...At first, I didn't tell him that I was infected, but I told him before my pregnancy.....At that time, I had had a good relationship with him for more 2 years, I loved him and I thought so did he (Kanchana).

“I met and lived with him more than 1 year ago, I had made a commitment relationship with him. I decided to tell him about my HIV because I thought that he would accept me, at the first thought, I had been hesitated to tell him because I'm not sure about the results, there might be terrible. However, he sympathised me, one thing was that I took care him well. We had very good relationship with each other, I loved him and he did” (Buraya)

“We married and lived together for ten years, I knew that he was HIV positive in 2013 and I was not, then on I decided to live with him even he was infected. Two years later I got HIV positive from him, I told him not worry, what will be will be, I didn't mind so much about my HIV positive because I decided to live with him at the beginning, so far it almost 10 years. ...We took care each other with

love and sympathy, this is my family where I will live and die with them, we have no others” (Sai).

3. Husband’s suspicion about HIV

2 out of 4 women revealed that they needed to conceal first but because they were taking a lot of medication (ARV) every day, their husband had asked questions such as *what kind of medicine did you take every day?, why did you need to take the medicine?.*

These questions prompted the women to use this as an opportunity to disclose;

“He saw me taking medicine every day, he asked what kind of medicine did you take every day?, why did you need to take some medicine. At first time, I was telling lie to him such as I was sick, I was aneamia but I thought he did not believe me.....at one day I decided to tell the truth to him, if I had not to tell him that day, he would know later...” (Buraya 19 year-old)

“...I decided to tell him about my HIV status, because he asked whether I had something to tell him. He said, “It seems you have something in mind, and you are worried.” When I heard his asking, I cried and I told him” (Kanchana 19 year-old)

6.5.2 Woman who concealed their HIV status (until ANC)

Most women (11 out of 15) decided to conceal their HIV positive status from their husbands. There were many reasons that women discussed in the interviews as to why they chose to conceal this information. Firstly, women feared a negative reaction and that their husbands would reject, abandon, blame or stigmatise them. Secondly, women had no idea how to disclose, how to start it or say it, it was difficult for them. So, these women thought that keeping it secret and disclosing later was the best course of action;

“I decided tell him about getting pregnant first because it was a good news for him, hired my HIV+ to tell later. I didn’t tell him at first time because we just wanted to learn each other, I was not sure that he has loved me and accepted me. If I told him, he would leave me far away, I’m not sure so, I left it to be secret until I was pregnant. ” (Muay 22 year-old)

“I decided tell him because I was being suspected by my husband and I think that he would know soon” (Uraiwan 21 year-old)

“I told nobody even my husband, I didn’t know how to say. However, he did know it just this pregnancy, I told him...” (Aonicha)

As a result, 9 out of 11 women concealed their HIV status until visiting ANC clinics. After deciding to keep pregnancy and visiting the ANC clinics. At this point women were given advice about telling their partners and also seemed to value the support of the ANC in doing this. The ANC visit prompted many to choose that moment to disclose;

“When I knew that I was pregnant, I decided to tell my husband about getting pregnant, he felt happy because he intended to have a child. After going to ANC, the nurse told me that I should take my husband to test HIV, I had thinking about for 3 days before telling my husband. I thought that I could not keep it secret, his mother is a nurse. She would know in one day, she would know. Another reason was the nurses would help me to talk with him, he would listen to them” (Uraiwan)

“Moreover, I didn’t think to be pregnant sooner, but when I was pregnant and I checked. A doctor advised me to keep a baby and the medicines can help me and a child, they should be taken continuously and a baby was less likely to be infectious. At the hospital (ANC), I had confirmed my HIV positive and my husband been beside me, he never knew my HIV before, that day the doctor and nurse called me and husband to the counselling room. I knew immediately what did they want to with us but I could not imagine what would happen to my husband if he knew. However, I would accept and face the truth which the doctor would tell my husband, it could not conceal in any way...So, he was informed my HIV positive at that day.....” (Tukta)

However, there were 2 women who decided to continue concealing their HIV status to their husband and did not allow the nurses at ANC to reveal their HIV positive status;

“He ever had some questions to me, but I told him that I had anaemia. I think to tell him so, but not yet, I may raise my children until they grow enough. At that time in the near future, I may let him know if he should decide to leave me, I would let my child alone. But absolutely not this time, I’m afraid that my family will be broken” (Panida 22 year-old)

6.5.3 Fears

Further analysis highlighted the fears that lead many women to conceal their diagnosis – and all of these issues were part of the decision making processes round disclosure – whatever the decision. There were 3 main aspects that were linked to the fears these women had: stigma from society and their husband, relationship with husband and their future.

1. Fear of stigma from society and husband

In Thai society, HIV stigma and discrimination is still significant. Participants had a strong perception that the community, family, health care providers even their husbands would reject and blame to them if they revealed their HIV status;

“That’s right, you know? It (HIV positive) is socially hateful or undesirable, I’m afraid that when he discovers his status or my HIV, he may flee or runs away in disorder.....I felt undermined. A doctor blamed me that I was not responsible for myself and asked me how I would look after my baby” (Panida)

“Quiet for a while... I was afraid that others might doubt of me because I had to go to the hospital very often and receive ARV drugs even after giving birth. Many would have a doubt of why I had to take a medicine, why I had to go to the hospital, and what I was.I’m afraid that the people will suspect me because my health is always strong. They may doubt why I see a doctor very

often. I have realized that, in the district hospital, there are many people recognizing me .So I must go to the provincial one to get drugs. (Panida)

“I told just closed family member, I not told anybody in my village because they would discriminate against me. In my community, people would not talk to me if they knew my HIV status, they would not have meals together and would not be associated with AIDS patient, as far as I know they would do like this” (Tukta)

“It is untreatable and social stigma disease....., in our society, people have been stigmatising and discriminating so far” (Muay)

“I have knew 2 women who just knew HIV positive and got pregnant, they did a suicidal themselves, they could not cope and accepted with this news as well as they fear of social stigma and undesirable. One of them I could help, she said to me that she had no one to talk with, then I encouraged, gave some information and took her to meet the doctor, she accepted herself and a baby, and kept going on her pregnancy later. Unfortunately, another one woman, she killed herself successful, I’m so sorry to hear that..” (Sai)

Women explained that they would suffer blame and/or abandonment from their husbands if they disclosed;

“Before I became pregnant, I never told my husband about my HIV result.....I thought that if he knew earlier he would not have a child with me, he would ask and blame me, at worst he will run away from me to look for better woman... I intended to tell him but didn’t know how to start, which word?...” (Tukta)

2. Fear of relationship with husband

The concern over the potential impact on their relationship was substantial amongst many of the women. They feared this would be broken, husbands would leave them to live alone. This feeling was higher in the cases of women who were highly dependent on their husband’s income - as they had no source of income themselves;

“Yes, It shows that I need rely on him including money. I don’t want anything (form this bad news) to hurt him and as well don’t want him to leave me later. If he leaves me, I’ll be in a trouble.Yes, I’m afraid that my family is not going to survive because I have to look after 2 children”. (Panida)

“Why would I not tell husband? It was hard to say...very difficult to let him know, I’m afraid that he would not accept me, he would angry. I decided tell him about getting pregnant first because it was a good news for him, hired my HIV+ to tell later” (Muay)

“... I intended to tell him but didn’t know how to start, which word?...” (Tukta)

“I cared about my husband’s feeling, I imagined that I had no idea about his reactions to this news,....I’m just a housekeeper, he is working for me...”. (Tukta)

“I would have told him but I had no idea how to tell him, how to start, one day, he asked my about the medicines which I’m taking every day, I let him look at my medicines and he knew immediately what the medicines were, I thought that it was time to tell him....” (Aonicha)

3. Fear of their future

There was also a fear of an uncertain future with their partners because of their HIV status amongst some women. They feared that one day, if they told partners or family members, they would be rejected and abandoned;

“Yes, I have reminded myself because he isn’t infectious. I’m afraid that he’ll find another woman without HIV+ disease in the future. However, he told me that he never left me and our baby....but I don’t know nothing is guarantee and I’m infected, he isn’t...” (Tukta)

6.5.4 Weighing/Balancing the pros and con of concealing HIV status

It was by weighing and balancing their assessment of the positive and negative results of concealing their HIV that was important in women's decision making. **Table 6.3** sets out the pros and cons that came from the data on this aspect.

Table 6.3 Weighing/Balancing the pros and con of concealing HIV status

<p>Pros of concealing</p> <ul style="list-style-type: none"> - Avoiding stigma and discrimination, could live as normal in society and family - Could maintain a good or normal relationship with husband - Husband did not worry - If husband knew women's HIV+ status after getting pregnant, husband would not leave because he would love of a baby (sometime, women would use pregnancy/baby as a negotiation) 	<p>Con of concealing</p> <ul style="list-style-type: none"> - Husband would know later - Husband would get HIV from women because of unsafer sex related to concealing issue
<p>Pros of disclosure</p> <ul style="list-style-type: none"> - If husband accepted women's HIV status, they could live normal in family - Women would feel better and free from having worry of keeping secret - Husband would have choices earlier to live or to leave with husband 	<p>Con of disclosure</p> <ul style="list-style-type: none"> - If husband did not accept women's HIV status, they could leave, abandon and blame them. - Husband would not intend to have a child and support doing abortion

6.5.5 ARV information from health care providers

Most women had been receiving ARV drugs since having their HIV positive diagnosis and visited hospital regularly before getting pregnant. Women said that the provision of ARV information made they have hope again about having a baby, they trusted the health care providers and ARV and this was also a factor in their decision making;

“Antiviral drug is my hope to live with my children longer, the nurse at ANC advised to me very well, they gave everything that I needed to know...”
(Aonicha)

“I have believed in the doctors and ARV....” (Sai)

“Receiving the information about medicines and the transmission from mother to child rates from health care providers very important, for me I have been taking the medicines for a long time, my baby would not be infected, they said like this. Moreover, they advised me how to take care myself. This disease you know, the nurses said that the AIDS patient could live longer than some diseases such as severe diabetes mellitus (DM) or heart disease which the patient would have sudden dead, I would not die sooner if I take the medicine constantly and take care myself very well” (Lew)

“Information that I have got from internet of other women and the health care providers as well as the supportive from my husband helped me to think about having a child ” (Buraya)

Insufficient information and stigma from health care sector experiences

Although many women felt helped by their contact with health care professionals – some women remarked on receiving incorrect information. Such as they could not get pregnant if they were taking ARV. Moreover, some women described negative aspects of their interactions with their health care providers;

“..the doctor just said that “you (women) should not become pregnant at this time, there would be many problems coming through to you and your baby in the future if the baby would be infected” (Buraya)

“A doctors at AIDS clinic disagreed and felt unpleasant when I had becoming pregnant....., the doctors blamed me that I was not responsible for myself to take constantly medicines and asked me how I would look after and feed my baby” (Panida)

“....the doctor had a strong disagree with me to have the second one, he said that I would not lucky like the first pregnancy....., before this pregnancy the doctor suggested me to adopt a child from relatives if I wanted a child ” (Sai)

“I think that none of doctors are happy and want the patients with HIV positive getting pregnant. I been experienced when I went to see the doctors, they have been asking the same questions like “why did you allow yourself becoming pregnant?, you knew that you are HIV positive, why didn’t got just one kid, why got the second one?” It shows that they’re not happy to see that I was pregnant. Moreover, what happen you know, even if they don’t agree that women are becoming pregnant, they don’t allow those women to do abortion, and tell women keeping their pregnancies. I have been confused...” (Muay)

6.6 Category 2 “Desire to have a child”

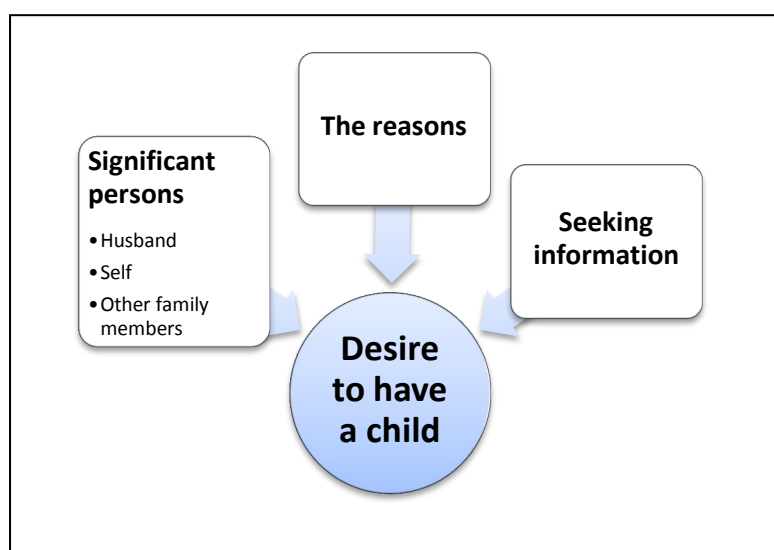


Figure 6.4: The relationship in category 2

Desire to have a child

Living together with either their partners or husbands, like other couples of reproductive age, these women intended to have a child one day notwithstanding their

HIV positive status. Desire to have a child was affected by 3 factors: *significant persons* wanting to have a child, the *reasons to have a child* and *seeking information*.

6.6.1 Significant persons

Significant people who influenced the decision making process were husbands, women themselves and other family members. Moreover, women who concealed their HIV status to husband said that they felt it would make no difference in terms of their husband wanting a child. Furthermore, among the women who disclosed their HIV status to their husbands early they still wanted to have a child - even though he was aware of this wife's HIV positive status:

"...my husband wanted a child, he has accepted my HIV, I told him that if I took medicine regularly, a baby would not be infected. So, he believed me..." (Buraya)

"I wanted a baby this time, I think I'm getting old, at least one child would be better than having none, it was myself desire to have a child" (Sai)

"I'm so happy because I intended to have a child before. I meant that I have intended to have a child, and I wanted to have a child before I became pregnant. When I knew my HIV positive, I let my husband know, then we decided to get married, after that I was pregnant." (Kanchana)

6.6.2 The reasons to have a child

There were many reasons for wanting to have a child - they wanted at least one child with their current husband, they loved children and wanted to be a mothers, they trusted in ARV and that it could improve their health and reduce transmission rate from

mother- to-child, the doctors and nurses informed that ARV can help mothers and babies against the HIV (generally) and some have a previous child without HIV;

“My first child was HIV negative although I knew when I had being pregnant up to 4 months then started medicines. So, this unborn baby would not too because I have been taking before becoming this pregnant.....” (Sai)

“I had the first baby with the first infectious husband. I got a son, and now he is 4 years old. But my son is not infectious.” (Tukta)

“.....I got one son (age 14 month) with my ex-partner, my son is living with my mum in her house. I had the first son after getting HIV+ but my son was HIV negative.....” (Muay)

“I knew that I was infected since become first pregnant, this one is the third, all of my previous two children were not infected. So, this baby would not too, I expected that way” (Aonicha)

They also felt that they and their child had a future ahead of them;

“...my husband wanted a child, he has accepted my HIV, I told him that if I took medicine regularly, a baby would not be infected. So, he believed me...I have intended to have a child and wanted to be a mother, I searched through the internet by Google searching, I had looked for “Do HIV women can pregnant?, How about one having a child”. The result was that they can be a pregnant but must take a medicine to protect the transmission to a child. In fact, I have took ARV since I was 7 years old” (Buraya)

“Yes, he did want a child. He told me that “that was fine”, he wanted to grow up a child, and so did I.” (Kanchana)

“He told that he was glad because he wanted to have a baby with me. At that time, he hadn’t known my blood test result yet. He knew it later....Now my first son is 13 years old, he would take care his young brother when something happen to me” (Aree)

7 of the women repeated this pregnant with a new partner as they wanted one child with this husband;

“This is a new husband, we decided to have a child together, I and husband wanted at least one child.” (Muay)

“I was pregnant when I was 16-17 years old. I worked in the province, knew my first husband, and had the first child together. In addition, I knew that I was infectious when I had the first child. After giving birth for a while, I broke up with him because he had another wife. However there were many men paying attention to me. Before I have been living with a current husband.....I wished to have a child with him in one day..... My parents liked him, and so did I. And they agreed that we should live together, so we decided to live together. I was pregnant when we lived together for nearly a year.” (Tukta)

6.6.3 Seeking information

Women have a follow up HIV/AIDS clinic appointment every 3 months for blood tests and to receive more ARV. In the hospital, women were given information about ARV that if taken ARV regularly, a baby would not be infected. In addition, some also sought HIV information on TV, the internet and from friends;

“Yes, A doctor has ever let me know that if I take the drugs early and regularly, the baby won’t be infected. And unless I feed the baby through breastfeeding, she won’t be infected” (Kanchana).

“I got information from doctors, nurses, internet and some of family member such as my step mother she is a nurse” (Urainwan)

“I got information from doctors, nurses, a friend(a lady boy), my mother and my new boy friend, he helped me very much, he gave me a lot of information and encourages. So, I very appreciated him.....” (Napat)

“I have intended to have a child and to be mother, I searched through the internet by Google searching, I had looked for “Do HIV women can pregnant?, How about one having a child”. The result was that they can be a pregnant but must take a medicine to protect the transmission to a child” (Buraya)

“The doctor said that I would live longer if I took constantly medicines, ARV is my hope.... ” (Aonicha)

“I went to consult the doctor in the hospital that I wanted to have the second child (that time I was infected already), the doctor had a strong disagree with me to have the second one, he said that I would not lucky like the first pregnancy. However, I went to meet him and show him how much I wanted to have more child, finally, the doctor said if I wanted to become pregnant I must do as he suggestion as much as possible. He advised me to stop having sexual intercourse with husband since I become pregnant through pregnancy time, I needed to take ARV as a guideline toward a baby birth and post partum period, until a baby would be confirm HIV status. When I became pregnant, the doctor encouraged me that a baby would be less infected because the virus were under controlled. I have believed in the doctor and ARV.... ” (Sai)

6.7 Category 3 “Becoming pregnant”

Being pregnant in this study was divided into 2 types of pregnancy; planned and unplanned pregnancies. There were 3 factors related to becoming pregnant, **Figure 6.5**.

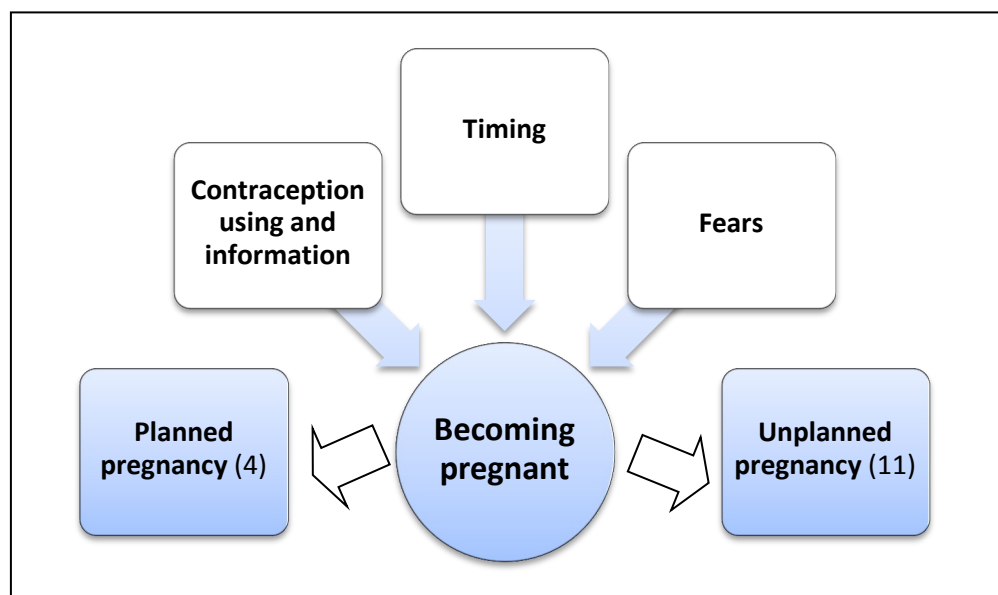


Figure 6.5: The relationship in category 3

6.7.1 Planned pregnancy

Where women had disclosed their HIV to husbands before becoming pregnant, women and their husbands talked together about having a child and the risks that they would face in the future. The women also sought information about pregnancy and mother to child transmission of HIV. The sources of information were doctors, nurses, internet, leaflets and friends (amongst those who decided to tell their friends). **Figure 6.6-6.7** sets out the factors related to decision making within planned and unplanned pregnancy and **figure 6.6** shows the characteristic of them from data analysis.

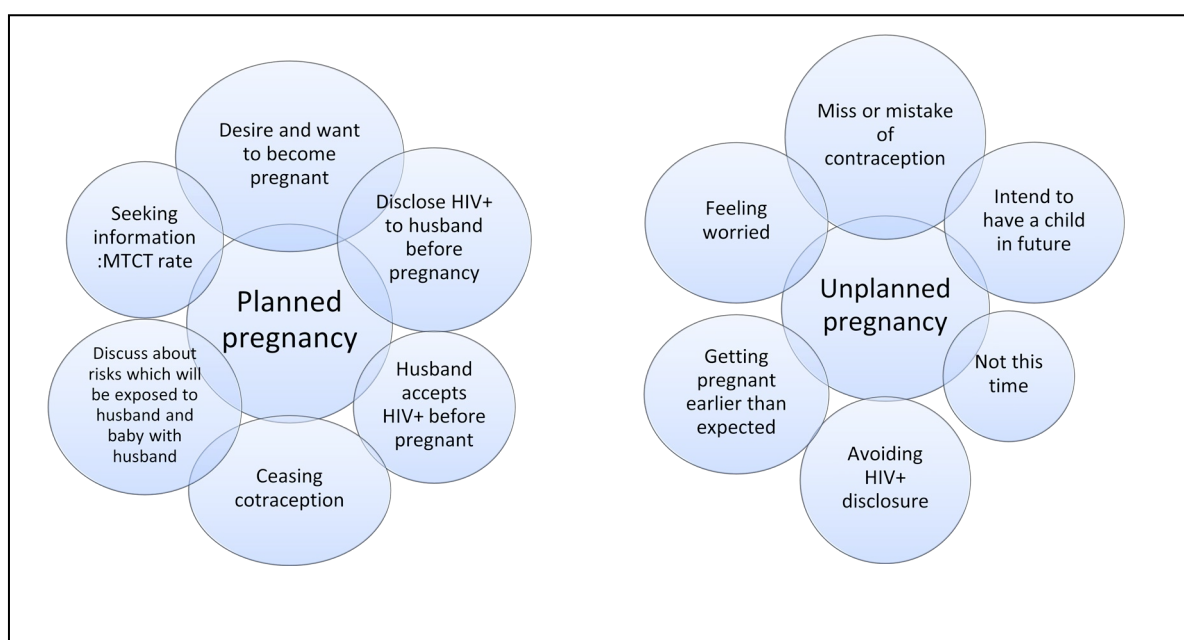


Figure 6.6: The characteristics of planned and unplanned pregnancy in this study

From figure, women who living with HIV identified being planned and unplanned pregnancy as follows:

Planned pregnancy

Planning to become pregnant happened in a group of women who disclosed HIV positive status to their husbands before pregnancy. The main reasons for becoming pregnant were wanting a child and ceasing contraception in order to become pregnant. In addition, women prepared themselves by seeking information from health care providers (Doctors and nurses), the internet, friends and family members. Women also talked to their husbands about wanting a child, the risks to transmit to partner and baby, future living then after agreement her with husband, stopping contraception;

“I’m so happy to become pregnant because I intended to have a child before. I mean that I have intended to have a child, and I wanted to have a child before I became pregnant. After he knew my HIV he hasn’t were condom because we have intended to have a child. Since I became pregnant, we haven’t had sexual intercourse so far” (Kanchana)

“I went to consult the doctor in the hospital that I wanted to have the second child (that time I was infected already),... I went to meet him and show him how much I wanted to have more child, finally, the doctor said if I wanted to become pregnant I must do as he suggestion as much as possible. He advised me to stop having sexual intercourse with husband since I become pregnant through pregnancy time, I needed to take ARV as a guideline toward a baby birth and post partum period, until a baby would be confirm HIV status. When I became pregnant, the doctor encouraged me that a baby would be less infected because the virus were under controlled. I have believed in the doctor and ARV.... ” (Sai).

“After I my first child was born, I and my husband planned to have more children closely and we planned to do sterilization after having the second child. So, I left contraceptive pills and become pregnant. We discuss a lot before deciding to have more child such as he must pause having sex with me after I becoming pregnant, I must take the medicine constantly..... ” (Sai)

“we talked together about having child, he intended to have and I did, I left contraception pills and male condom until I got pregnant...” (Buraya)

6.7.2 Unplanned pregnancy

In this study unplanned or accidental pregnancy means getting pregnant earlier than expected. The participants all intended to have a child in the future but not at this time, not right now. The main cause of getting accidentally pregnant was missing contraceptive pills. For the group of women who avoided HIV positive disclosure to their husbands, all of them were not ready to get pregnant at that time because they had to go to the hospital for routine HIV screening, and their husbands might then come to know their HIV positive status. Normally, all pregnant women, who were infectious to HIV positive, would be informed by nurses to take their partners for HIV screening altogether. Moreover, planned and unplanned pregnancies were also affected by fears, contraception use, information, and timing as **figure 6.7** below:

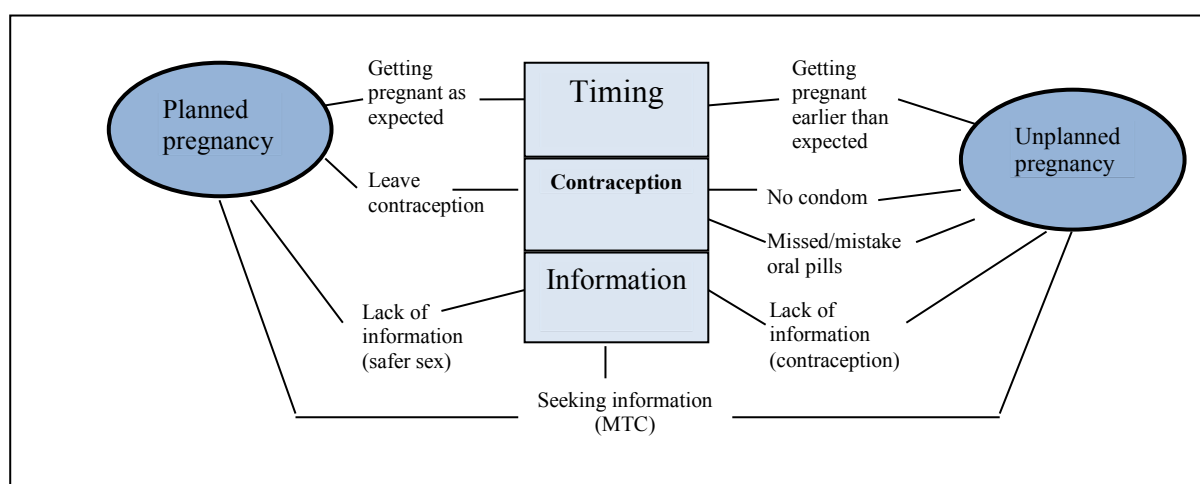


Figure 6.7: Becoming planned and unplanned pregnancy in this study

From figure 6.7, the women who got pregnant accidentally were all using oral contraception. Pregnancies arose as a result of missed pills. None of the couples were using condoms as asking for this may raise questions about HIV from their husbands;

“This pregnancy is unplanned because it was just only 10 months between two pregnancies, I didn’t think it comes soon, I took pills but I become pregnant again in 10 months. Might be one time I forgot to take a pill then I restarted” (Panida)

“This pregnancy I’m not intended to have this time, I missed some contraceptive pills, at that time I went out of the city and forgot pills and then I become pregnant” (Peungpen)

“This pregnancy is unplanned, it’s about missing contraceptive pill, the doctor ever told me to do sterilisation after giving last child but I’m afraid of surgery and I did know a little bit about contraceptive using ” (Aonicah)

“It was unplanned pregnancy, I intended to have in the future but not right time. I was pregnant by accident because I didn’t understand about taking contraceptive oral pills, I have confused that when to start and how to take them as well as my husband didn’t wear condom, he said it was not felling naturally when wearing condom, I didn’t force him to use condom too ” (Malee)

“When I knew that I got pregnant, I felt emotional, not happy. At first I wanted to do an abortion because I was not ready, and I didn’t do it on purpose. At that time, my menstruation didn’t show, and I waited for it. I decided to buy a pregnancy test strip, and it showed 2 lines. I meant that I didn’t want to become pregnant at that time, I wished to have a child with him in one day after I had consulted the doctor about my planning, but haven’t asked them yet, I become pregnant. I didn’t use or take anything .I used to take birth control pills before, but I experienced a vomiting problem like being allergic to birth control pills. After contraceptive injection, I became fat, so I stopped doing it. My husband didn’t wear condom because he didn’t know that I was infectious when we firstly lived together” (Tukta)

“The first pregnancy was unplanned, this second one was too, I have known about kinds of contraception such as male condoms, oral pills and injection but they were not my pleasant pills and injection as well as male condoms so, I got pregnant. By the way, in my opinion, I thought that males have been less infected because a man injected semen out of the body meanwhile a woman received his semen so, a man has low risk, a woman has high risk up to 80% to get HIV, isn’t it?. Moreover, my husband hasn’t preferred to wear condoms sometime even he has known my HIV status” (Muay)

6.8 Category 4 “Keeping or terminating pregnancy”

Some women from both groups, whether their pregnancy was planned or unplanned, weighed up the issues related to keeping or terminating their pregnancy. This decision was the consequences or sub-categories of a bivalent decision stage. Please see **figure 6.8** below.

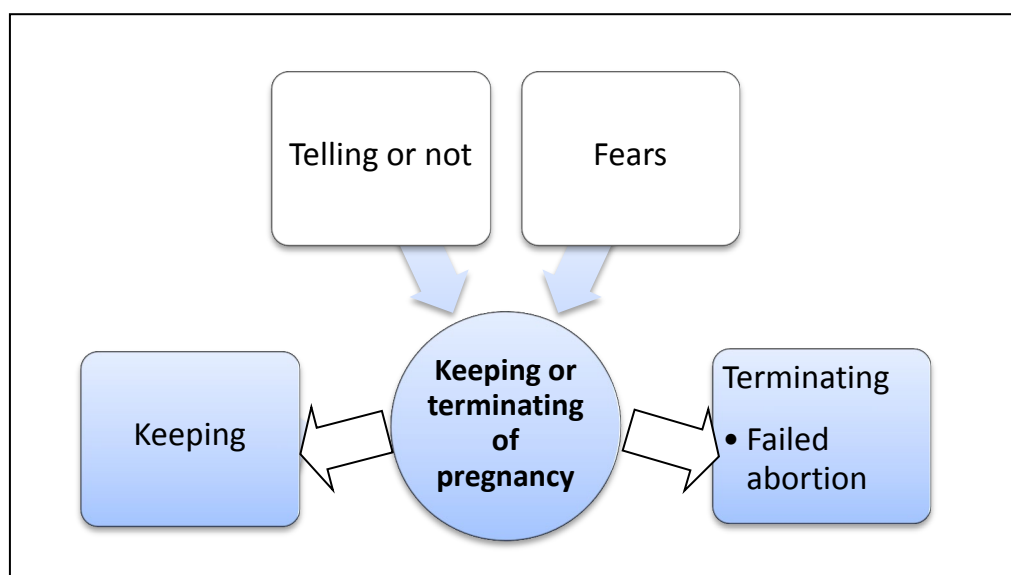


Figure 6.8: The relationship in category 4

6.8.1 Keeping pregnancy

The reasons for keeping the pregnancy were linked to the fear of committing a religious sin (rule of Karma in Buddhism), fearing the complications of an illegal abortion, their prolonged gestational age (GA), wanting a child, feeling love for a baby in womb, desire for motherhood, husband had accepted her HIV status and baby;

“I never thought of abortion because I wanted a baby, I wanted to be a mother. I was excited and worried to have the first pregnancy but happy more than worrying. I’m really happy especially when a baby is moving in my womb” (Buraya)

“...I didn’t do abortion because I needed and loved a baby, motherhood is very important, I would do any things in order to against HIV infection to my baby such I would take medicines everyday even sometime I could not tolerant with side effects, I would not abandon my child even if he would be infected, thought that whatever happened, I would love my child in any ways.... (Sai)

“I have never thought about doing abortion in this pregnancy because I did 3 time of abortions, no more abortion, it’s time to have at least one child for me... ” (Lew)

“I have never had an abortion, I’m afraid of complications like bleeding and shock. If an abortion was failed and I was sick, I would be in trouble... ” (Aonicha)

6.8.2 Terminating pregnancy

6 out of the 15 women had a prior experience of abortion in previous pregnancies, 3 of 6 women (Aree, Tukta and Malee) attempted an abortion in this pregnancy. The reasons to have an abortion were around not being ready to become pregnant this time, concealing HIV positive status (did not want husband to know), fear of negative relationship with husband, and concern that the child will be infected.

- Aree knew when she was 3 months pregnant. The reasons to have an abortion were afraid of disclosure and fearful of a baby’s infection.

“When I knew my pregnancy, I was afraid, I was afraid that my cousins would know .I didn’t want them to know and I didn’t my baby born with infection.....I tried to drive a baby out. My pregnancy was nearly 3 months. I started taking a blood-driving medicine, which could be found in general pharmacy. After taking it, I had a uterus ache, but nothing happened. Then I decided to do an abortion in an illegal clinic. An officer in the clinic inserted a medicine into my

vagina, half an hour later, there was blood flowing out except a baby, and I spent ₦12,000 (300 GBP) for an officer. A day later, I went to my home for waiting to see something dropped out from my womb but nothing. I phoned to an illegal clinic why a baby didn't come out. It let me do an abortion three times, but it failed again. So I stopped doing an abortion because I had no more money. I thought that an abortion for me might fail, so I let it be.” (Aree)

- Tukta knew when she was 2 months pregnant. The reasons to have an abortion were not ready at that time, afraid of relationship between her and husband, and worried about a child.

“Not only a thought but also I tried, I bought a blood –driving medicine (herbal liquor, a trade mark is given here.....) from a grocery to drink. An acquaintance told me that a blood – driving medicine could drive off the blood and a very little baby. Some local people, they knew that I wanted to do an abortion, but I didn't tell them that I was infectious. They always asked me why I wanted to do an abortion. I told them that I was not ready and I wanted to do an abortion. So they suggested me to buy a blood - driving medicine to take” (Tukta)

- Malee, the reasons to have an abortion were not ready at that time (unplanned).

“I'm not ready to have in that time, I thought and did it an abortion, I took a blood – driving solution but failed then I told my husband about pregnancy but hide doing abortion” (Malee)

Outcome of Abortion attempt

Although some of women (4 women) had successful abortions in previous pregnancies, all of 3 women who tried an abortion for this pregnancy failed. Following this they decided to keep the baby and not try an abortion again. The next step was to tell their husbands about their pregnancy.

“Yes, I had did abortion in this pregnancy, but it failed.... It let me do an abortion three times, but it failed again. So I stopped doing an abortion because I had no more money. I thought that an abortion for me might fail, so I let it be” (Aree)

“After taking, I had a uterus ache, but nothing out from my womb... I didn’t try other method, I just tried to drink this liquid up to a half of bottle, it wasn’t success. My husband didn’t know at I did an abortion. After that, after failure, I had just told him. I decide to discuss with my husband about what to do next. He said, “A baby wants to be born with us, it doesn’t matter, and let it be?” (Tukta)

“...I took a blood – driving solution but failed then I told my husband about pregnancy but hid doing abortion” (Malee)

Despite the fact that women intended to have a child and planned to become pregnant at some point in their lives, being ambivalent between keeping and terminating unborn babies happened to all participants. There were 2 factors that contributed to this *bivalent decision phase*; fears and pregnancy disclosure (telling about getting pregnant or not) – these are described in the next section.

6.8.3 Fears and ambivalent decision on pregnancy

The main concern in this category was fear. Fear was a feeling or emotion which happened through pregnancy period and near birth.

What did they fear in this process?

There were 2 kinds of fears, in findings, which they felt fearful: babies’ infection and the woman’s own future.

-Fear of a baby's infection: this kind of fear was the most worrying in both a planned group and an accidental pregnant. Every woman stated that she was worried about a baby's HIV positive result; a baby would be infected with HIV positive although she took ARV consistently;

“Although the doctor told me that a baby would be less infected in my case because I have taken ARV for a long time, I was still being fears in my deep mind of a baby' HIV result” (Aonicha)

“I am scared that my baby will be infected. A doctor is in charge of an infected clinic said that the baby must be infected. Because I didn't use a condom before pregnancy, and I didn't take care of myself as well as I did during a previous pregnancy, I paused ARV before this pregnant and started too late...” (Panida)

“I'm afraid that he'll (a baby) be infectious and others know.” (Aree)

-Fear of their future: it was a fear of uncertain future based on the relationship with their partners - they feared that in one day if they told partners or family members, they would be rejected and abandoned. Although some women had told husband earlier, they still being feared that their husband would abandon them, especially women whose husbands were HIV negative;

“I was afraid that my cousins would know. I didn't want them to know and I didn't my baby born with infection” (Aree)

“I'm afraid that he (husband) couldn't bear his or my HIV status if he were transmitted and knew my infection. I must raise my child alone. Moreover, I'm afraid that the people will suspect me because my health is always strong. They may doubt why I see a doctor very often” (Panida)

6.8.4 Telling or not telling about getting pregnant

Pregnancy disclosure was related to the concealing of their HIV positive status in these women. Most of the women who got pregnant accidentally did not let husbands know immediately about the pregnancy, some of them decided to attempt an abortion before letting their husbands know. In women who did not attempt an abortion, they would let their husbands to know later. Telling husband about being pregnant resulted in women going to receive antenatal care at ANC clinics. Once at the clinic, women needed to disclose their HIV status because of routine HIV screening at the hospitals;

“I decided tell him about getting pregnant first because it was a good news for him, hired my HIV positive to tell later. I didn’t tell him at first time because we just wanted to learn each other, I was not sure that he has loved me and accepted me. If I told him, he would leave me far away, I’m not sure so, I left it to be secret until I was pregnant. ” (Muay 22 year-old)

“When I knew that I was pregnant, I decided to tell my husband about getting pregnant, he felt happy because he intended to have a child. After going to ANC, the nurse told me that I should take my husband to test HIV, I had thinking about for 3 days before telling my husband. I thought that I could not keep it secret, his mother is a nurse. She would know in one day, she would know. Another reason was the nurses would help me to talk with him, he would listen to them” (Uraiwan)

“Moreover, I didn’t think to be pregnant sooner, but when I was pregnant and I checked. A doctor advised me to keep a baby and the medicines can help me and a child, they should be taken continuously and a baby was less likely to be infectious. At the hospital (ANC), I had confirmed my HIV positive and my husband been beside me, he never knew my HIV before, that day the doctor and nurse called me and husband to the counselling room. I knew immediately what did they want to with us but I could not imagine what would happen to my husband if he knew. However, I would accept and face the truth which the doctor would tell my husband, it could not conceal in any way...So, he was informed my HIV positive at that day.....” (Tukta)

6.9 Category 5 “Accepting a decision”

The women had come along the process of their pregnancy so far, and they passed many steps such as the initial HIV positive disclosure and concealing HIV to their husbands, getting pregnant with a plan or by accident, deciding to keeping or trying to terminating their unborn babies. Since deciding to keep their pregnancy, all women accepted their pregnancy. There were 2 consequences of accepting the decision to continue with the pregnancy; wanting the pregnancy and accepted any results from the pregnancy and HIV disclosure. Factors which affected this process were; ANC support, crisis point of HIV disclosure and couple and family supports (See figure 6.9).

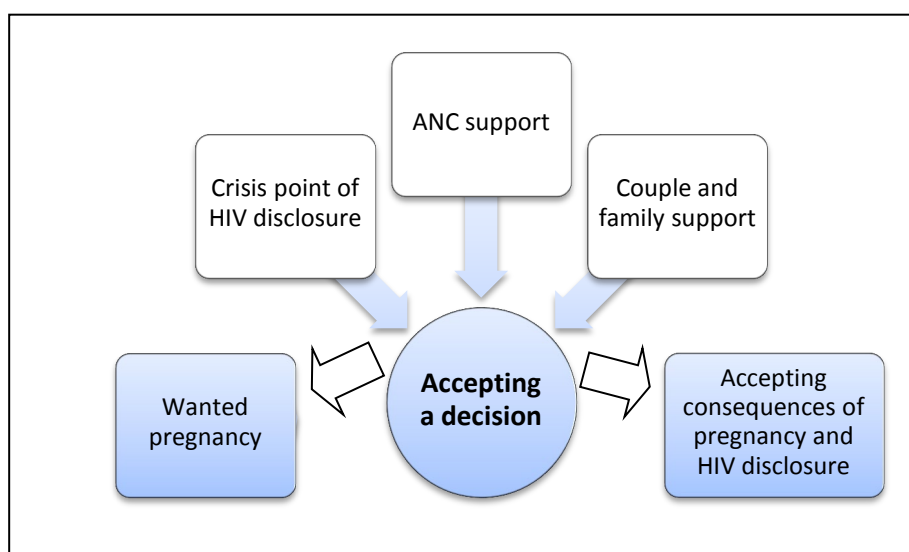


Figure 6.9: The relationship in category 5

6.9.1 Wanted pregnancy

A wanted pregnancy was the result of wanting to keep a baby until its birth. In addition, this study found that women would eventually come to accept their pregnancy, want a baby to be born, stop thinking about an abortion, keep going in their pregnancy and feel happier. The components of wanted pregnancy in women who living with HIV described in **figure 6.10**.



Figure 6.10: The characteristic of wanted pregnancy in this study

A wanted pregnancy was described by women in terms of feeling they had the autonomy to decide to keep their baby, this was accompanied by their awareness of being HIV positive, and having a strong desire to be a mother; whatever the consequences.

6.9.2 “Crisis point of HIV disclosure”

“Loss of control”

If a woman’s HIV result was positive in the ANC, a nurse would advise the woman to ask her partner in for HIV screening. This request for partner HIV screening is to prevent a transmission from or to a partner(s). However, this advice was a recommendation only – the clinic cannot compel the woman to do this.

However, 9 women who had avoided disclosure so far decided to reveal their HIV positive status to their husband at this point, they allowed the nurses to tell this news at the next ANC follow-up when accompanied by their husbands. At this time, women knew that there would be **“loss of control”** of their HIV positive status. This was a difficult stage in the pregnancy process for both the women and their husbands;

“Yes, after I went to ANC, a nurse recommended me to let my husband know and convince him to test his blood. Then I took him to the hospital to see the doctor....The doctor called us and informed my HIV to him, he was frightened and up set, but said nothing. The nurse at ANC advised him to take HIV testing, he did it, but virus (HIV) didn’t show at first time. Next 3 months, a nurse made an appointment with him to do a blood test again in February..... However, after the nurse had told him my HIV, and he wasn’t infected I was really happy, it released my tension to tell him, moreover, he didn’t get HIV” (Aree)

“It shouldn’t be like this. He knew it later, and I never told him that I was infected. A nursing officer took our blood for HIV tested when I came to the hospital to do antenatal care with my husband. I certainly thought that he would know this time, I couldn’t do anything. After that, a doctor told us to know the blood test at a time. The results were that I was infectious, but he wasn’t. I cared about my husband’s feeling, I imagined that I had no idea about his reactions to this news, but I was glad that husband wasn’t infectious. When he knew that I was pregnant, he was glad but when he knew that I was infectious, he was stunned and cried, especially in the day when we knew our different blood test results. He was disappointed because I never told him, he told me that he

sympathised me and a baby and he thought he might be infected also. I wanted to tell him, but I was afraid that he would mind. I didn't know how to start while we had spent life together. He was just in silent when a nurse let him know. When coming back home, he blamed me and asked the reason why I didn't tell him. I replied to him that I didn't want to have a baby and going to do abortion if he didn't want a baby. Then he comforted me that it happened and could not be solved and let it be. It already happened.1 or 2 weeks later, we went to see the doctor again, the nurse at ANC helped us very much to support mental health and gave useful information, I and husband felt better then. He said to me that "we had a baby, and he had to be accepted", "Don't worry about the blood test result, I would infect, if I'm infected, let it be...." (Tukta)

“The reaction of husband to the news”

There were a lot of emotional reactions from husbands when the women's HIV status was disclosed. Most women said that the first reaction from their husband was shock then lack of belief, panic or quiet, confusion, asking, and wanting to confirm that was real? These reactions would take a different time, from a few hours to many days, to be resolved. All the women's husbands (13 out of 13) eventually accepted this news (the women's HIV positive status) when informed by the woman or the nurses at ANC (even though the timing of disclosure varied across the time span of their pregnancy):

“The doctor called us and informed my HIV to him, he was frightened and up set, but said nothing. The nurse at ANC advised him to take HIV testing.....,He was sad that I was infectious. He asked me how it could happen, and who I was infectious with. I said, “I don't know because I have sexual intercourse with you and ex-husband, might be from one of ex-husbands..... He changed his behaviours from never drank alcohol previously to drink very often, and is distressed. He thought that he might be infected but after testing, he wasn't infected.....” (Aree)

“My husband was glad when he knew I was pregnant. But when he knew that I was infectious, he was stunned and cried, especially in the day when I knew my blood test result. He was disappointed because I never told him, When coming

back home, he blamed me and asked the reason why I didn't tell him..... I didn't know how to say and I'm afraid of his leaving..... Then he comforted me that it happened, HIV could not be changed and let it be..... He told me that he sympathised me and a baby, he would not leave me and childrenNow, he never blames me again, it seems that he may cope with my HIV but we are worrying about a baby blood result after birth... ” (Tukta)

He said, “It seems you have something in mind, and you are worried.” When I heard his asking, I cried and I told him. I told him that I got this disease, and I got it from my parents when I was born. He showed nothing. He told me that “never mind”. I asked him if he'd like to leave me after he had known. He replied, “No, I don't leave you.....” (Kanchana)

“At that time, when I told him about my HIV positive, he was quiet a minute and could not say anything, he could not believe it. He asked me that “How was it happened? How did you get this disease? I replied him that I've got it from my mother since I was born. I was not a playgirl and having sex with many guys, he knew me well. Later, he sympathised me he told me that “Never mind if you got infection from your mother, you had no choice”. I was happy to hear that. Then we desire to have one child together..... ” (Buraya)

“From worst to worth”

After their HIV status was disclosed most of women felt bad and experienced fear and worry about their husband's reaction to this news. However, later, all of them felt that they were set free from feeling bad and fearful for keeping the secret of their HIV positive status. Although still anxious about their husband's reaction they felt lightened that the big secret from their husband was gone and there was no secret to worry about. In another words, it could be said that “*A crisis point of HIV disclosure*” was actually also “*a turning point*” in that it relieved the women from this burden they were carrying, concealing. Moreover, it was also a starting point to receive mental and physical support from their husbands and health care providers;

“You know, after he had known my HIV, I felt that my tension has been released, my head was lighter not hard, it was not very happy but better” (Aonicha)

“...Later, he sympathised me he told me that “Never mind if you got infection from your mother, you had no choice”. I was happy to hear that. Then we desire to have one child together..... ” (Buraya)

“.....He did blame me at first, but he didn't do it later. It's pretty good now. He understands me more. We always go everywhere together, and he takes care of me very well” (Aree)

“...He told me that “never mind”. I asked him if he'd like to leave me after he had known. He replied, “No, I don't leave you..... ” (Kanchana)

6.9.3 ANC support

It was clear that the support the women received at the ANC was very important. They got help regarding their HIV status, advice on the therapy and pregnancy and also, crucially, support (if required) with disclosing their status to their husband;

“.....I went to meet doctor and show him how much I wanted to have more child, finally, the doctor said if I wanted to become pregnant I must do as he suggestion as much as possible. He advised me to stop having sexual intercourse with husband since I become pregnant through pregnancy time, I needed to take ARV as a guideline toward a baby birth and postpartum period, until a baby would be confirm HIV status. When I became pregnant, the doctor encouraged me that a baby would be less infected because the viruses were under controlled” (Sai)

“Receiving the information about medicines and the transmission from mother to child rates from health care at providers ANC very important, for me I have been taking the medicines for a long time, my baby would not be infected, they said like this. Moreover, they advised me how to take care myself. This disease you know, the nurses said that the AIDS patient could live longer than some diseases such as severe diabetes mellitus (DM) or heart disease which the patient would have sudden dead, I would not die sooner if I take the medicine constantly and take care myself very well”. (Lew)

“.....Furthermore, the doctor let me think about how I plan for an infected baby if a baby be infected. Yes, I have. I intend to take care of a baby and feed her AVR syrup as told” (Panida)

There were some women who felt they did not have enough information to prepare to become pregnant from AIDS clinics, but they got this information from their ANC clinics after receiving maternal and child care;

“At AIDS clinic, doctors and nurses didn’t want me to have a child soon because they told me I just teenager but I wanted to have a baby after I and husband discussed about wanting a child I decided to become pregnant. I didn’t get the information from that clinic about pregnancy too much because they disagreed to me, they just recommended me to take ARV regularly all my life, but I got from ANC after becoming pregnant” (Buraya)

“I’ve got information and treatment from a doctor and nurses at Ban rom yeon (AIDS clinic), they suggested me to receive the medicines every three month and take my blood checked every six month, and pregnancy care from ANC clinic.” (Kanchana)

6.9.4 Couple and family support

In this study, it was found that almost the husbands (11 out of 13) who had had HIV concealed from them were ultimately supportive of their wives. Those husbands still living with women, did not leave as the women feared and began to support or encourage their wives until the baby was born (some women gave birth during data collection period):

“I’m HIV positive and pregnant, my partner is a foreigner, he understands my situation and encourages me to have no worry, don’t stress he said. He sent the money from abroad to take care a baby, he has come to visit me at least once a year, he’s not a rich man and he send the money every month. This support helps me not in trouble too much” (Hom)

“My husband wasn’t infected, after he knew and accepted my HIV, he told me “that’s fine, I would not leave you, I will help you take care our baby”
(Uraiwan)

“Supports each other in my family which both of us are infected very important to each other too, we have to support and encourage our family, no one can’t help if we leave each other. I love him and he loves me, and our children....”
(Sai)

“I live with my mother and brother after divorce from my husband, they are very important to me, they accepts me. They know that, my HIV status could not be changed.....” (Lew)

“It’s very important to me. My parents told all members not to drive in me but take care of me, because I’m considerably distressed. My mom gives an advice for everything; disease and life. Also my husband told that he never left me alone, would live together, and did not fear what would happen” (Tukta)

“It’ pretty good, my family are very good to me but they don’t know my HIV. When they knew I was pregnant, they wanted to help me to look bring up my baby, especially after giving birth. When my health is strong, I’ll return to do my sewing job. Yes, my husband supports me also, he has to work” (Aree)

Although all of the husbands (13 out of 13) initially accepted this news (women’s HIV positive) and almost of them (11 out of 13) chose to stay in the relationship 2 husbands later left the women (Lew and Napat). Lew’s HIV negative husband left 2 years after knowing her HIV positive status, he and Lew decided to divorce and he left a few months before the interviews for this study. For Napat, her pregnancy was as a result of her sex work and her husband, although initially accepting this situation eventually decided to leave her (4 months later) – although they still contacted each other by phone occasionally. (See their background in **appendix G** for further details).

Husband's HIV results

7 out of the 15 husbands were HIV negative. 3 were positive before their relationship with the woman in this study and transmitted HIV to their wives (Malee, Navarat and Sai). 5 men's (husbands of Panida, Peungpen, Napat, Hom and Aonicha) HIV status was unknown before they met the women in this study because they did not have a test (Please see details in demographic data table in **table 6.2** and **appendix G** also).

6.9.5 Accepting the consequences of pregnancy and HIV disclosure

Part of the latter stages of decision making involved women accepting the consequences of the decisions that they had taken. In terms of their pregnancy, women would accept the outcomes; whether a baby would be infected or not, a baby would be healthy or not and also any economic impact of the pregnancy. Women would also accept the consequences of their HIV disclosure such as a period of instability within their relationship with their husband or stigma from the people who would now know their HIV status (husband, family, health care provider or neighbour):

Yes, I'm worried about 2 things, firstly, It is the most worried for me that I'm afraid my baby will be infectious. Secondly, relationship with my husband in the future because he isn't infectious, I'm afraid that he'll find another woman without HIV positive disease. However, if my baby would be infected, I will love and take care my children always. If he leaves me, I will be strong and try to keep my life going on" (Tukta)

"There are two types of HIV mother, one is that the mothers not accept the baby in womb, they may think about doing abortion of unborn baby or abandon baby after born in order to have new life, some women would kill themselves (suicide) to eliminate any problems. Another one is women who can accept baby, these women love their baby more someone love more than love herself" (Sai)

“So far, I don’t care, don’t think too much about how people think of me, I’m not look down on myself. I have faced and passed many troubles in my life. Now, I’m divorce, if my husband doesn’t respect me, he would tell about my HIV to others, I don’t care, no worry. I think that I’m already got HIV, It can’t change, and I’m not harm or hurt people....Now, I live for my baby and my mum ” (Lew)

“In the future, whether this baby would be infected or not, my husband would stay or leave me, I must be strong now and would live by myself although it will be hard” (Aonicha)

“.....I would happy if my baby were not infected but...Umm...a doctor said that this baby would be infected because of lack of ARV drugs, I didn’t take the drugs continuously. For the previous pregnancy, I took the drugs continuously. After giving birth, I had stopped taking until I knew that I became pregnant at 5 months. However, I have to accept it whatever will happen I will live for my children. Furthermore, the doctor let me think about how I plan for an infected baby if a baby be infected. Yes, I have. I intend to take care of a baby and feed her AVR syrup as told.” (Panida)

“.....My babies! Now I have one in my body, one is waiting at home. How they will be are important. I have to go on with my family and am ready what will happen next.” (Aree)

6.10 Category 6 “Adapting to their decision”

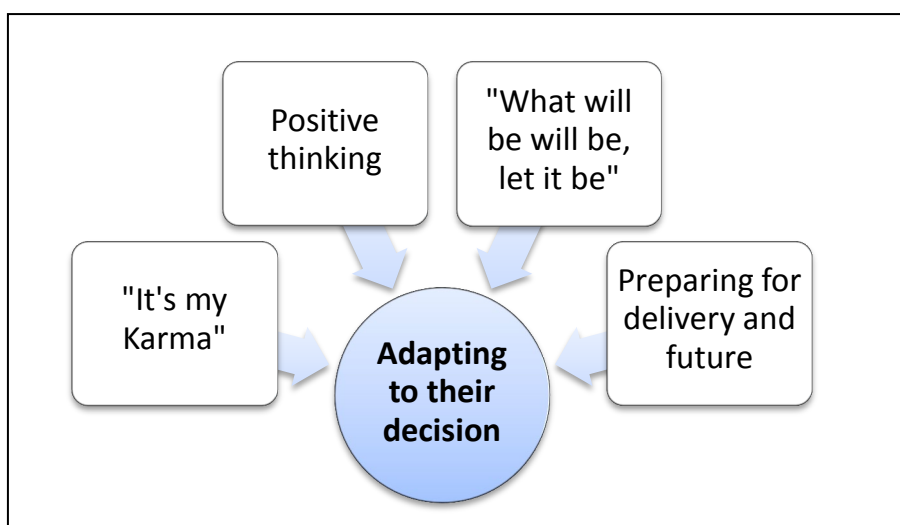


Figure 6.11: The relationship in category 6

Women use their beliefs as important strategies for managing fears and adapting, explaining and justifying their decisions in relation to their pregnancy. Their religious faith was an important element of this - called ***“Rule of Karma”***.

There were 3 targets of adaptation in this study; Adaptation to Self, adaptation to pregnancy and adaptation to their relationship with their Husbands.

6.10.1 Adaptation to Self: "It's my Karma" or “something wrong or mistakes in the past”

Those women believed that their infection was caused by Karma and mistakes by them in the past. So, the strategy women living with HIV used was the acceptance of **“Karma”**. Karma; when they believe that their infection was the result of karma that was committed to them in this life or in the past. They have to accept and compensate for Karma. To manage Karma women are required to do good deeds for bad Karma to be ‘blown away’.

Likewise, they believed that their HIV infection is also caused by such karma as some women had had unsafe-sexual intercourse in the past and therefore believed that they were being affected by ***“something wrong or mistakes in the past”***:

“It’s my Karma, I have accepted it and paid for by myself, I didn’t blame anybody including my ex-husband who had transmitted HIV to me, just blamed myself what a silly me....” (Aree)

“....I had blame myself what the bad things and bad behaviours which I had done in the past.....It myself Karma to accept” (Napat)

“It’s my Karma which turned from my parent, my father was a playboy, he might hurt many women then those women or their parents could anathematize for his scandal behaviours. So, this Karma can entail to me. However, Karma

isn't the main matter for me, it was something wrong which I had done in the past by foolishness, during my teenage time I spent my time in waste way and prank" (Lew)

"I was just 17-18 years old at that time, I was innocent and didn't relies on the dangerous of sexual disease transmission such AIDS via sexual intercourse with my boy- friend. I have reflected thinking back to that time, I might be infected from one guy but how I can do now, I can't change anything in the past. I wished, I could have changed the past....." (Muay)

"I can't change my HIV positive so, nowadays I'm living as a normal one...." (Aonicha)

6.10.2 Adaptation to Pregnancy (An unborn Child): Positive thinking and motherhood

Alongside the belief in Karma women also began to focus on the positives of their situation – by concentrating on their baby. Woman indicated that a baby is the most important person, a heart of motivation and a meaning for living. The strategy used to adapt to being pregnant and to the unborn child was thinking positively.

Positive thinking

A negative element of their pregnancy for all the women was the fear of a child's infection. Therefore, a positive thought was used to negate this. Positive thoughts and reasons derived mainly from the reliability of the effectiveness of antiviral drugs to decrease in the risk of their baby's infection helped women to believe that their baby will not be infected. In addition, the majority of women (9 out of 15) had a child before this pregnancy and they had delivered a child HIV-negative then for example.

Moreover, positive beliefs about the effectiveness of antiviral drugs also helped women frame their pregnancy more positively;

“My first child was HIV negative although I knew when I had being pregnant up to 4 months then started medicines. So, this unborn baby would not too because I have been taking before becoming this pregnant. The doctors said that “you are taking ARV, don’t worry, If you are worry too much, your CD4 would be decreased and your health would be weaken, a baby would not full healthy” so, I became taking care myself and my unborn baby, took ARV constantly although I have been allergy some medicine, I have vomiting and fatigued but I ‘m still taking for my child” (Sai)

“I knew that I was infected since become first pregnant, this one is the third, all of my previous two children were not infected. So, this baby would not too, I expected that way” (Aonicha)

“So far, I have less worried because I had talked and seen with some HIV mothers who were got 1 and 2 children, their children without HIV positive so, I do. If I’m on ARV constantly, my baby would not be infected, I’m quite sure about this, it was waste time to worry about it.....,I don’t care, don’t think too much about how people think of me, I’m not look down on myself.....” (Lew).

Motherhood and bonding

Women indicated that feelings of motherhood were intensified when they became pregnant. This increased as their pregnancy progressed, and their baby grew bigger in their womb, enabling them to sense its movement:

“For me,... motherhood is very important, I would do any things in order to against HIV infection to my baby such I would take medicines everyday even sometime I could not tolerant with side effects, I would not abandon my child even if he would be infected, thought that whatever happened, I would love my child in any ways.... There are two types of HIV mother, one is that the mothers not accept the baby in womb, they may think about doing abortion of unborn baby or abandon baby after born in order to have new life, some women would kill themselves (suicide) to eliminate any problems. Another one is women who can accept baby, these women love their baby more someone love more than

love herself...I'm a mother, I can accept myself, my husband and my children and I love them so much..." (Sai)

"I'm very glad to become pregnant and have my own baby, when I saw other children, I always feel happy and now I have my baby. When I knew that I got pregnant, my tear came out from my eyes with happiness. ... I'm really happy especially when a baby is moving in my womb. I think that he (the baby) is communicating to me, response to me, wants to react to me. I can't wait to see his face..my son" (Buraya)

"I want to become pregnant, I wished to grow up children (smile widely), I have experienced with taking care of my younger sister, my husband wants me to have our own child, because my husband and I love children... I don't think and worry so much and take it easy." (Kanchana)

".....I live right now because of my baby. I want to take care of them best... I'm afraid that he'll find another woman without HIV+ disease. However, if my baby would be infected, I will love and take care my children always. If he(husband) leaves me, I will be strong and try to keep my life going on" (Tukta)

"So far, I don't care, don't think too much about how people think of me, I'm not look down on myself. I have faced and passed many troubles in my life. Now, I'm divorce, if my husband doesn't respect me, he would tell about my HIV to others, I don't care, no worry. I think that I'm already got HIV, It can't change, and I'm not harm or hurt people....Now, I live for my baby and my mum " (Lew)

"I'm also afraid that my baby may be delivered with physical disability because I had done abortion, it might affect to my unborn baby.....I live right now because of my baby. I want to take care of them best " (Tukta)

".....My babies! Now I have one in my body, one is waiting at home. How they will be are important. I have to go on with my family and am ready what will happen next." (Aree)

Some of participants indicated that they will **"do my best"** as a mother:

"...My husband is not living with me now, he is a foreigner and living abroad. He wants me take care a baby at home, he has been sending me the money every month. I'm doing my best now as a mother, I will do my best to care of her during and after birth" (Hom)

“.....I live right now because of my baby. I want to take care of them best”
(Tukta)

“It’s my duties, I’m a pregnant I have to take care my baby in me best” (Napat)

“It’s my responsibility, as a pregnant I have to set alarm clock to take medicines at the same time ever day, eat the healthy food and have a good mind, ...just do it like that and do as much as possible, do it best. However, for a good mind I think I have not do well because I’m often moody, irritation, and drink coffee”
(Malee)

6.10.3 Adaptation to Husbands’ Relationships: “What will be will be, let it be”

The strategy used towards any issues in their relationship was *“What will be, will be”*.

This thought might occur as a result of preparing to accept the negative effects that may occur in the future, such as their husbands’ desertion, preparing themselves to accept their husband’s HIV infection, and a whole family’s infection at worst. The thought, *“What will be will be”*, occurs with preparing themselves to experience the situations which they cannot define or control. Their goal was to lessen current tensions and it was a way to prepare them for potential bad news in the future:

“Yes, I have reminded myself because he isn’t infectious. I’m afraid that he’ll find another woman without HIV+ disease in the future. However, he told me that he never left me and our baby....but I don’t know nothing is guarantee and I’m infected, he isn’t.....Just live and let it be, what will be will be.....”
(Tukta)

“It already happened .We had a baby, and he had to be accepted. “Don’t worry about the blood test result, I would infect, if I’m infected, let it be,” said he “(Tukta)

“We are just living with each other as long as possible, what will happened in the future, will be” (Aonicha)

“I decided to live with him from my HIV negative to positive, I would not leave him alone, let it be...” (Sai)

6.10.4 Preparing for delivery and the future

The last step of the pregnancy decision process is preparing for delivery and the future. From acceptance of the decision to adaptation to self, a baby and husband, women had found ways of thinking to cope with their situation, as thoughts became more positive women began thinking of plans and behaviours such as how to take care of their baby, preparing for childrearing, the postpartum period and some sort of future:

“I have planned to tell my mother come to help me taking care a baby after maternity leaving. During leaving I will take care my children (Aonicha)

I care of my child, I couldn't have free life style as a single because I'm going to be a mother. I'm going earn and save the money for baby and future, it's hard to be a single mum but not too much, I think I can do it as well as possible...” (Lew)

“I don't intend to have more child after this pregnancy, I have already discussed with my husband that If this baby birth I'll do sterilization. After a baby birth, I don't allow my baby to drink my breast milk, but powdered whole milk because a baby would receive HIV by breast milk. I think that my mom can help me taking care my children. After 5-6 months, I'll find a job to do because my baby may be strong enough” (Tukta)

“.....Furthermore, the doctor let me think about how I plan for an infected baby if a baby be infected. Yes, I have. I intend to take care of a baby and feed her AVR syrup as told” (Panida)

“I can't wait to see his face.....my son....I will take care a baby as a doctor and nurses told me, I won't feed breast feeding, I will feed syrup medicine for the baby, I wish I would live as long as possible, may be many years to take care my baby, I have to take care myself best to be healthy. A doctor told me that I would live up to 10 years if I take care well myself and take ARV drugs regularly. I hope that, if something would happen to me later, my husband would take care our child...” (Buraya)

I wished to grow up children (smile widely), ... I don't think and worry so much and take it easy. I think that if she is born, I can take care of her. In the future, if I should die, I would ask for help from my husband and his relatives. If my baby is born, I'll have enough money, and I'll be supported by my step mother because my grandma is too old to take care of a child. (Kanchana)

"I would do anything for better life as far as I can...I even thought that if I and husband would die, before that, I would send my children to the orphan foundation houses which I have contacted..." (Sai)

6.11 Conclusions

The main research question of this study has been investigated using a constructivist grounded theory approach. As the result of the data analysis, a model of pregnancy related decision making process consisting of 6 categories was constructed. This complex model is proposed to explain the issues and struggles these women went through as part of their HIV positive pregnancy journey. The model shows how they faced dilemmas along the way and throughout had to make difficult decisions. They did this by using the concept of 'balancing' – weighing the issues and consequences of each stage of their pregnancy and the decisions it required of them. This included managing the disclosure of their HIV status, decisions about even whether to continue their pregnancy through to eventually arriving at a place where they were able to accept their pregnancy and manage, with health professionals help, their pregnancy and lives in a positive way. The next chapter will discuss the findings by placing them in the context of both the empirical and theoretical literature.

Chapter 7

Discussion

The pregnancy decision making process for these women who living with HIV is not simple, and is influenced by the infection itself, socio-economic factors, stigma and discrimination from others and their own and others personal and social beliefs. This chapter will place the findings in the context of the empirical literature presented earlier in the thesis – exploring and discussing how this study adds to that research. It will also look at the theoretical context of the grounded theory of pregnancy decision making process and present how this study links to those theories. The chapter is divided into 2 sections. The first section will discuss the model and its 6 categories in detail, linking them to the most significant global and Thai literature – including the concept of balancing as the concept guiding the decision making process. The second section will cover the theoretical issues emerging from the study – particularly around pregnancy decision making.

7.1 Section 1: Discussion on the overall model and categories

According to Charmaz (2006: 130), *“A constructivist proceeds to the phenomena to see how and why the participants construct the meaning and action in specific situation by interpretation of participants and a researcher”*. In this study, based on a constructivist grounded theory, a substantive model was a produced and demonstrated how women living with HIV construct their pregnancy choices and decisions around 6 categories; 1) Concealing HIV positive status from husband, this category was divided into 2 subcategories; disclosed and concealed. The factors affecting a disclosure decision were

weighing the pros and cons of concealing – informed by the fears and information that they had at this stage; 2) Desire to have a child, influenced by 3 factors; the reasons to have a child, seeking information and the desires of significant others (husband) in wanting a child; 3) becoming pregnant, was divided into 2 subcategories; planned and unplanned pregnancies. The factors affecting becoming pregnant were fear and contraceptive and safer sex information; 4) keeping or terminating pregnancy, was divided into 2 subcategories; terminating and keeping pregnancy. The factors affecting this bivalent decision were pregnancy disclosure to husband and fear; 5) accepting a decision, consisted of 2 subcategories; accepting a pregnancy (baby) as wanted pregnancy and accepting the consequences of pregnancy and HIV disclosure. The factors playing significant roles to pregnancy acceptance were Ante Natal Clinic (ANC) support, mother to child transmission information and couple or family support. In addition, *“loss of control”* relating to HIV concealing control and *“HIV disclosure crisis point”* were discovered and offered as key factors in this stage; 6) adapting to their decision, this stage was divided into 3 categories; adapting to self, women using religious belief as *“Rule of Karma”* and reflections on the past as *“something wrong or missing in the past”*, adapting to the pregnancy and the baby by using *“think positively and motherhood”*, and adapting to husband and further relationship with husband as *“what will be, will be”* and *“let it go”*.

7.1.1 Category 1 “Concealing HIV positive status from husband”

All of the 15 women decided to conceal their HIV status from their husband at first, just 4 women told their husband before pregnancy, 11 out of 15 women told their husbands after getting pregnant and 2 women kept their HIV status secret until much

later in the pregnancy. The women had many reasons to conceal their HIV status. Firstly, they feared the negative results of disclosure. Secondly, they struggled with a difficult situation such as how to break their news, how to start with this issue.

HIV disclosure related to stigma and discrimination

Many studies show that the issue to disclose HIV status or not varies - some women disclose while many do not (Hardon et al., 2012; Rujumba et al., 2012; Carter & Kraft, 2013; Hernando et al., 2014). Deciding whether to disclose or conceal HIV to someone, especially a new partner, depends on personal beliefs, perception of level of stigma and discrimination to self and the level of relationship with those people. Sanders (2009) analysed the issues of disclosure amongst women with HIV and found that decisions about disclosure and the timing of disclosure were complex and often based on the assumption the women had a sexual relationship that was going to develop into a long-term one, and that there was complex mixture of emotions including fear, stigmatization and denial affecting the decision to disclose. In Sander's (2009) study all of the participants desired children but also wanted to protect their husband from transmission. In this study of Thai women the issue of wanting to protect husband from transmission did not feature strongly – perhaps because some were using condoms, but protecting their husbands did not appear to be a strong motivation factor. The relationship between HIV disclosure and stigma among HIV infected people is identified by Brickley et al. (2009) where participants chose not to disclose their HIV status fearing stigma and discrimination. In addition, they described how participants chose not to disclose their HIV status to family members because firstly, they were in stable health and were able to hide their infection, secondly, participants expressed concern about causing

emotional trauma to family members, and thirdly, the participants worried that their children could face discrimination whether they were infected or not.

HIV disclosure relates to the nature of the relationship

This study of Thai women found that in the early part of the relationship women had not wanted to tell their husband about their HIV positive status until they were sure about the relationship. If the relationship between women and couples was strong, they would plan to reveal their HIV status. If it was not, they would keep it secret. Women would weigh the significant pros and cons of disclosure each time. This aligns with the work by Derlega et al. (1998) who found that women weigh carefully who to tell about HIV and that factors such as the importance of the relationship, the level of relationship, length of time of the relationship and the development of trust were all considered within the decision making process.

Hays et al. (1993) describe how women may receive psychological benefits from disclosure if surrounded by understanding family and friends – but that many also do not disclose because they fear that their partners will leave and they will attract social stigma and discrimination if their HIV positive status becomes known. In other words there would be few benefits of disclosure (Hays et al., 1993). In this study the HIV positive Thai women were clearly aware of the potential consequences of disclosure and this was a result of their awareness on many of the widespread beliefs about HIV in Thailand.

In general, Thai people have negative attitudes to HIV positive people. Attitudes such as prejudging, rejection, disapproval, and discrimination have been linked to the public's

fear of AIDS and the belief that HIV is associated with risk behaviours/groups of people such as sex workers, drug addicts, the sexually promiscuous and men who have sex with men (Ross et al., 2009; Thiangtham & Bennett, 2009; Ministry of Public Health, 2014). The Thai public's fear of AIDS is also driven by the belief that there is no method or treatment that can cure HIV infection and that it is a deadly disease. So, in Thailand people with HIV can still face significant social stigma and discrimination (Ross et al., 2007, 2009; Thaingtham et al., 2009).

More recently, in Thailand, HIV has moved away from high-risk groups to women who are the wives or housekeepers infected by their husbands. However, this has created a sense of the innocence of these women and how they became infected (Ross et al., 2009; Youngwanichsetha et al., 2010; Ministry of Public Health, 2014) – the strong negative attitudes against HIV continue to persist. Consequently, most Thai people living with HIV/AIDS including the pregnant women in this study decided to conceal their status rather than disclose until visiting the ANC service to avoid suffering from social stigma and discrimination.

However, whilst the women chose to not reveal their HIV status in order to avoid problems such as stigma this led to another problem; the risk of transmission to their husband/partner during having unprotected sexual intercourse. Choosing to disclose or not disclose HIV to another is affected by what Derlega and Barbee (1998) refer to as the “*social implications*” of disclosure and would depend on an individual's personal characteristics and their perception of people and how those people actually react to them. In this study, driven by the fears of the consequences of disclosure and being

aware of the risks to their husbands the women decided to conceal their HIV status from their husband – although the length of time for this non-disclosure varied.

7.1.2 Category 2 “Desire to have a child”

In this study all the women knew their HIV positive status before becoming pregnant and desired to have at least one child with their current husband. This desire was a strong motivating factor and this part of the decision process was divided into 4 parts; desire to have a child, the reasons to have a child, significant persons and seeking information.

Firstly, the desire to have a child among women who living with HIV, this desire is seen within the global literature; HIV positive women desire a child despite their HIV infection (Cooper et al., 2007; Nóbrega et al., 2007; Gogna et al., 2009; Marcellin et al et al., 2010; Firth & Wang, 2012; Loutfy et al., 2009, 2012; Huntington et al ., 2013; Hernando et al., 2014).

This desire is often against strong social disapproval of women with HIV having a child (Cooper et al., 2007; Ross et al, 2007; Kanniappan et al., 2008; Sanders, 2008; Barnes & Murphy, 2009; Demissie et al., 2014; MacCarthy et al., 2012; Liamputtong & Haritavorn, 2014). Despite this, many women in this study and those in prior studies still wanted children. Although the desire to have a child by women who living with HIV is often against social opinions, as Barnes and Murphy (2009) found, many women chose to weather these social opinions and become pregnant.

This study also found that although women desired to have a child and become pregnant they were reluctant to tell their health care providers in HIV clinics. This was because they were afraid of the health care professional's reaction to this. This reluctance is also reflected in the global literature where women fear a judgemental reaction from their health care providers (Cooper et al., 2007). Indeed, Finocchario-Kessler et al. (2010) found that just 31% of women living with HIV of reproductive age discussed their childbearing plans with their provider. In Thailand the research amongst HIV health professionals also shows that many feel women who living with HIV should not become pregnant (Youngwanichsetha et al., 2010; Ross et al., 2013; Liamputtong & Haritavorn, 2014). This study has shown that these attitudes and beliefs held by health professionals are conveyed to women in HIV care services (but not ANC care services) with women in this study reporting instances of disapproval and blaming coming from HIV care providers in relation to HIV related pregnancies. This demonstrates that many of the Thai negative beliefs and attitudes towards HIV even make their way into the health care environment and affect the openness of women about their pregnancy plans and desires.

Secondly, the reasons why the women wanted to have a child. This study found that there were many reasons such as wanting at least one child with their current husband; their husband wanted a child (ren), they loved children and wanted to be a mothers. In addition, they trusted that their ARV treatment would maintain their health and also reduce the HIV transmission rate from mother to child, this enabled women to think of their future raising children.

Deciding to have a child in women is related to the concept of motherhood. Women in this study decided to have and carry a pregnancy because they loved children and they wanted to be a mother and seen by others in a mother's role. Motherhood is described by some as a basic instinct of being a woman – a biological factor influenced by psychological and social norms (The Royal College of Midwives, 2012). In this study the women demonstrated their desire to become mothers. In a Thai context, motherhood holds an important status and women are expected to have children when they marry – so there is a social pressure on women that compounds their desire to have a child (Ross et al., 2007; Youngwanichsetha et al, 2010; Liamputtong & Haritavorn, 2014). However, the women had to balance this against the stigma associated with HIV infection with pregnancy in a Thai context. The way they chose to do this was by becoming pregnant but concealing their HIV status.

Thirdly, all of the 15 women declared their decision to become pregnant was influenced by the desire of their husbands to become a father. However, this was without the knowledge that their wife was HIV positive. This decision not to disclose seemed related to not trying to dampen this desire for fatherhood – indeed, the women revealed that if their husbands had known their HIV status before they became pregnant, he would have not desired to have a child.

The impact of a male partners desire to have a child has also been seen in international studies. For example, Nóbrega et al. (2007) found the variables independently associated with women's desire to have a child was the partner's desire for a child, a partner who did not know about the woman's HIV positive status was negatively associated with the woman's desire for a child. In addition, other family members

wanting a child also affected women, Oosterhoff et al. (2008) found that the family's role in decision making about childbearing by an HIV infected woman was an important factor that affected women. In addition, Beyeza-Kashesya et al. (2010) found among couples in which the woman was HIV positive, young age and relatives' expectations for children were significantly associated with increased fertility desires. Within this literature there were no accounts of women deliberately concealing their HIV status from their husband in order to become pregnant; something that this study adds to our understanding of HIV related pregnancy.

Lastly, seeking information; a key factor that influenced the desire for a child was the HIV therapy they were receiving, and the health information they had about HIV transmission rates. Women gained this from their ANC health providers. Studies internationally show that as women become more aware of the way HIV risks to their baby can be reduced and also the support they can receive from health care providers (in the ANC) their desire to have a child outweighs the risks (Taha et al., 1995; Sheri et al., 2004; Chilongizi et al., 2008; Gruskin et al., 2008; Finocchario-Kassler et al., 2010).

7.1.3 Category 3 “Becoming pregnant”

11 out of the 15 pregnancies in this study were ‘unplanned’ with 4 participants saying their pregnancy was planned. However, in any case the fact that a pregnancy occurred shows that all the women had unprotected sexual intercourse with their partners. Furthermore, all 15 participants intended to have a child at some point –when they had more money or had told their husband about their HIV status for example. However, in reality, most of them were pregnant earlier than their expectations and plans,

especially amongst the group of women who concealed HIV status to husband. Furthermore, although women used the term ‘unplanned’ it seems that they mean this quite literally ‘at that point’ as they were aware of the chances through unprotected sex. In addition – these women were also reluctant to ask their husband to use a condom as this would raise suspicions as to the reason for this.

In this study then the use of the term ‘planned’ would fit with the definition of ‘planned pregnancy’ by Barrett and Wellings (2002) which was when a women had a conscious decision to become pregnant and that her and her partner had discussed about how the baby would fit into the women or couple’s life. The explanation of “unplanned” was lack of intention to become pregnant. In another words, it would be a “mistake” and “accident” to become pregnant. However, these terms actually cover women who desired to get pregnant and those who – although aware of the risk – still thought of the pregnancy as unintended. This also affected the way women responded to their pregnancy related to abortion decisions that will be discussed later.

Kikuchi et al. (2011) investigated factors associated with unintended pregnancies amongst women living with HIV knowing seropositive status, and also factors associated with the non-use of contraceptives among women who living with HIV under ART, found that among all 565, 263 had sexual intercourse during the last three months. Of them, 85 women did not use any contraceptives. Sanders (2009) found sexual behaviours in 9 pregnant-women who had become mothers post-diagnosis that some of them were vigilant about condom use in the beginning of a relationship. The women reported that as time passes, more risks were taken and condom use decreased. What none of the studies show is how this sexual behaviour fits with pregnancy related

decisions – where this study does show how this ‘risky’ sexual activity fits within a larger pregnancy decision taking model/process.

In the data there was some discussion that ineffective use of contraception was also a contributory factor; missed pills, lack of knowledge of safer sex and non-condom use for example were cited as one of the reasons some women became pregnant earlier than expected. Although Thailand has high percentage of contraceptive prevalence in reproductive age at 80% (Bureau of Policy and Strategy, 2013), contraceptive health education in specific groups such as teenagers and high risk of sexual transmission diseases (STDs) groups especially AIDS are still insufficient.

Studies in Thailand describe how insufficient information during the reproductive age contributes to the rates of unwanted pregnancy in teenagers, sexual disease transmission, high rates of illegal abortions and new born baby abandonment amongst young women (Ministry of Public Health, 2014; Ministry of Public Health, 2015) and can create suicidal ideation among Thai women who living with HIV all ages (Boonpongmanee et al., 2003; Thiangtham et al., 2003; Ross et al., 2007; Ross et al., 2009; Thiangtham & Bennett, 2009). A lack of male condom use in this study supports the findings of other studies that negative attitudes towards using the male condom by the husband is the main cause of problem in Thailand (Kaewruomwong & Singchai, 2009; Rujkorakarn et al., 2010; Ministry of Public Health, 2014). Internationally, inconsistent condom use was found in women who living with HIV and couples (Nakaie et al., 2014). When condoms were used inconsistently, the highest rates of unintended pregnancy were observed among couples requesting condoms compared with contraceptive methods (Kikuchi et al., 2011; Wall et al., 2013).

So, lack of safer sex information and knowledge are the main reasons for the spread of HIV in Thailand (Ministry of Public Health, 2014, 2016). For example, Rujkorakarn et al. (2010) studied the sexual behaviour of Thai HIV infected people of both sexes who were taking ARV and found that women considered that they could not refuse sexual intercourse irrespective of the use of a condom or not - as sexual intercourse was their duty, whereas men were much more in control over whether a condom was used or not. Moreover, some HIV positive people in this research revealed higher rates of sexual activity as they felt better due to the ARV treatment they were taking - this sometimes led to unsafe sex behaviours and of some of women who living with HIV becoming pregnant. (Rujkorakarn et al., 2010; Ministry of Public Health, 2014, 2016; Kaewruomwong & Singchai, 2009).

Finger et al. (2012) also found that the pregnancy rate in young HIV positive women was associated with increased rates of unprotected sex with their non-concordant partner. Similarly, Kikuchi et al. (2011) found that unintended pregnancies in women who living with HIV using ARV was associated with having sexual intercourse during the last three months with non-use of contraceptives. In addition, Sanders (2009) found pregnant-women who had become mother post-HIV diagnosis were vigilant about condom use in the early stages of a relationship, but as time passed, more risks were taken and consistent condom use decreased.

7.1.4 Category 4 “Keeping or terminating pregnancy”

When faced with the news that they were pregnant 12 women decided to keep their pregnancy and 3 women attempted an illegal abortion (up to 1-3 times in one instance)

but failed – with all 3 eventually deciding to keep their pregnancy. At this point in the decision making process all the women faced a bivalent decision between seeking an abortion and keeping the pregnancy. The reasons for keeping the pregnancy were fear of committing a sin (rule of Karma in Buddhism), fearing the complications of an illegal abortion, the prolonged gestational age (GA), wanting a child eventually, feeling connected to the baby in womb, desire for motherhood, husband had accepted her HIV status and the pregnancy. On the other hand, the reasons for an abortion were women feeling not ready to become pregnant, that a pregnancy would result in them having to reveal their HIV positive status to their husband, the fear that the pregnancy will damage the relationship with her husband, and worried about that the child becoming infected with HIV.

The factors in the HIV pregnancy decision process in this study are similar to those described in the international research on HIV pregnancy (Liamputtong & Haritavorn, 2014; Ross, 2013; Chi et al., 2011; Youngwanichsetha et al., 2010). In addition, Chi et al. (2011) explored decision making with 20 women who living with HIV in Vietnam who decided whether to continue or terminate their pregnancies. They found that 13 of 20 pregnant women with HIV positive decided to terminate pregnancy because of their concerns about HIV social stigma, disapproval by their partners and family, their short life, and their babies difficulty life (whether getting infected or not). 7 of 20 women decided to keep their babies because they, their husband and other family members wanted a child. They described feeling hesitant, insecure and uncertain about what to do. Some women revealed that they made pregnancy decision responding to the needs and demand of their husband or others while some women decided their own choices

(Chi et al., 2011). Unlike this study, none of these international studies found, explicitly, that an abortion was considered to protect a woman's HIV status from her husband.

Youngwanichsetha et al. (2010) found that HIV positive pregnant women weighed their options regarding the continuation or termination of their pregnancy. Being ambivalent between continuing and terminating was based on 4 things. Firstly, being concerned over mother to child transmission of HIV; they were worried that the children would be infected and they did not want to give birth to infected children. Secondly, the desire to have a child and the social value of motherhood. Thirdly, preferring to keep the child; women who preferred to keep a child expressed a strong desire to have a child, had a planned pregnancy and had a low concern over mother to child transmission of HIV. Fourthly, considering an abortion; women who preferred to do an abortion expressed a low desire to have a child, had an unplanned pregnancy and had a high concerns over mother to child transmission of HIV.

In short, although most women faced the choice of an abortion this would have needed to be illegal and was one that might be seen from the perspective of Thai laws and beliefs about abortion in order to fully understand this aspect of the decision making process concerning the women in this study.

Abortion law, policy and beliefs in Thailand

Abortion is largely illegal in Thailand as it is against Buddhist beliefs and laws. In Thai law there are fines or even imprisonment associated with seeking or conducting an abortion (Kusalanan, 2011). However, there is a legal exception when the mother's life is in danger. There are many conditions and diseases that are included in this law but

HIV/AIDS is not one of them (Youngwanichsetha et al., 2010; Kusalanan, 2011). Therefore, the only path to women living with HIV who did not want to continue with a pregnancy was an illegal, potentially very unsafe and very ineffective procedure. In addition to legal barriers there were strong beliefs around abortion in Thailand that also influenced women's reproductive decisions.

Thai culture also views abortion as wrong – largely influenced by Buddhism. Firstly, Buddhism believes that nobody should violate another. Physical, mental and verbal violence to self and others are considered as “bad sin or bad karma”. Abortion in Buddhism is killing someone, killing self or someone else is considered as severe bad karma which the makers would receive the highest punishment in their next life. In this study, there were 12 Buddhist women who avoided doing an abortion due to their fear of bad Karma.

Nevertheless, despite the legal and religious influences there were 3 women who decided to seek an illegal abortion, some of them tried to do it more than two times. Doing an abortion was a contrast to their religious beliefs and also illegal but these women indicated that they really needed to do it as they had no way out on their situation. The women also thought that if an abortion was successful, many further problems would have not happened. It seemed to be “*selfish*” to decide to terminate a baby by others' views but for women it was a “*survival way*” for a better future. It was also the case that some women decided to abandon their religious beliefs in order to keep their HIV secret.

7.1.5 Category 5 “Accepting a decision”

This stage of the decision making process would emerge when women started to recognize and realize that they are women who living with HIV and accept their pregnancy. Pregnancy acceptance consists of two linked two sub-categories: *1) wanted pregnancy, 2) I will accept the consequences of being pregnant and an HIV positive woman (pros and cons in terms of an infected child and a husband’s relationship in the future).*

Even though some women claim their pregnancy was unplanned – and also some of them tried unsuccessfully to have an abortion – all 15 women eventually reached a stage where they came to accept their pregnancy. This was partly due to the matter of unplanned pregnancy becoming a wanted pregnancy – an example of how ‘unplanned’ does not always mean ‘unwanted’. This point is made by Barrett and Wellings (2002:550), “*unplanned or unintended pregnancy could become a wanted pregnancy*”. However, once deciding that the pregnancy was wanted the women were very aware that this created a situation they had to face – a situation which involved them having to manage the consequences of their pregnancy.

These consequences were whether her baby would be infected or not, whether her baby would not be healthy due to the complications of an illegal abortion attempt, economic issues (leaving her job for example). However, although challenging, the issue of disclosure of her HIV status (for the women who had not already disclosed) became a very real matter. In this part of the decision process women realised that there may be consequences to their HIV disclosure, women would have to accept whatever may

follow disclosure, such as, an unstable or unpredictable relationship with their husband and stigma from the people who would know their HIV (husband, family, health care provider or neighbours) in the future.

HIV disclosure ‘control and out of control’

A crucial stage in the decision making process was the involvement of the Ante Natal Clinic (ANC) and the health professionals the women engaged with at this stage of their pregnancy. At the ANC, HIV status is routinely discussed with all women – with women either disclosing their status or undergoing HIV screening. All of the 15 women in this study had already had their HIV status confirmed so the discussion with the ANC nurse turned to the next step of inviting the women’s partner/husband for HIV screening also. However, this advice was only a recommendation to the woman to do so – there is no compulsion. At this point, women who had not disclosed their status experienced a *“loss of control”* in that they were now faced with a strong motivation to inform their husband. This was a cause of worry – but the ANC also offered a way of gaining help with this difficult issue.

This study found that ANC nurses played an important role of women’s acceptance of their pregnancy, having a positive outlook and also facilitating the disclosure of their HIV status to their husbands. This mental and physical support from nurses at the ANC during pregnancy was a great support and a turning point for these women. Similar support for women living with HIV who often feel isolated is described by Rujumba et al. (2012), who found that most HIV-positive women requested health workers' support in disclosing their HIV status to a partner or husband. Tyer-Viola (2007) and Hanh et al.

(2009) also report how good ANC care helped women with HIV make decisions about their pregnancy, disclosure of HIV status and birth decisions.

However, despite this support in the ANC some women in this study stated that they still faced negative attitudes from some health care providers and did not want to share their story too much. This 'mixed-picture' is also reflected in the literature – studies still reveal women with HIV describing negative attitudes and poor care in the ANC environment (Viana et al., 2013). Kelly et al. (2013) found that the key ANC staff can have significant positive and negative impacts on the experiences of HIV positive pregnant women; empathy and understanding of their unique needs and continuity of care fostered a good experience for example whilst lack of communication, lack of knowledge and experience of HIV care contributed to negative experiences (Gogna et al., 2009). Similarly, Moodley et al. (2014) argue that the ANC as a place that fosters reproductive rights for women with HIV and is a crucial aspect of HIV maternity care and that staff should be non-judgemental. In addition, research also suggests that the social-cultural context within which women who living with HIV of reproductive age live and how that affects pregnancy decisions should be better understood by all health professionals who hope to improve the quality of their lives (Nattabi et al., 2012).

Couple and family acceptance is a great support

Unsurprisingly, all the husbands who learnt by the work of the ANC that their wife had HIV reacted negatively at first. Most of them felt shock, unbelievable, panic or confusion, asking, and wanting to confirm their wife's HIV status. These reactions would take different times to play out - from a few hours to many days. At the ANC the

husbands were offered an HIV screening test after which most of them were confirmed HIV negative. However, in all 15 cases husbands moved from this “*crisis point*” to “*a turning point*” and decided to be supportive of their wife and her pregnancy. This type of process was also found by Visser et al. (2008), who report that the initial the reaction of family members to the HIV positive status of a pregnant woman was disbelief and shock, but that this eventually turned to them being supportive. In addition, in another study, HIV infected pregnant women who disclosed their positive status generally experienced supportive responses from their partners (Rujumba et al., 2012).

Family support was one of the most significant predictors of disclosure, intent to have a child and keeping a pregnancy for women who living with HIV. Kanniappan et al. (2008) and Ross et al. (2012) found that the main factors contributing to women living with HIV who wanted but did not have a child were their levels of anxiety about the future and family support. Women who indicated that they did not have family support and were stigmatised by the family were continue their pregnancy as they were not sure about the future, including child care in event of their death. In contrast, those women who decided to have a child did so based on family support, especially when family members offered to take care of the child in the future in the event of parental death.

7.1.6 Category 6 “Adapting to their decision”

The final stage in the model of HIV pregnancy decision making was the women and their husbands adapting to their decision to accept the pregnancy and the forthcoming child. There were three elements to this stage; adaptation to self, adaptation to pregnancy and adaptation to relationship.

Adapting to self; women used their personal and religious beliefs to deal with their fears and to develop coping strategies. This religious belief was “**Karma**”. Adapting one’s mind to the decision was found to be a useful strategy to accept the pregnancy and the outcome in an HIV positive pregnancy. This does reflect the findings of other research into HIV and pregnancy where one of the most common coping strategies was spirituality (Ross et al., 2007; Youngwanichsetha et al., 2010; Leyva-Moral et al., 2017).

Adapting to a baby and pregnancy; women in this study adapted their thoughts in relation to their pregnancy decision by thinking positively about their motherhood. These positive thoughts helped the women to refute any negative fears, worries, and stress. Help from nurses in the ANC was important here –they helped develop the women’s positive thoughts and also provided information – for example, on the effectiveness of antiviral drugs in decreasing the risk of baby being infected with HIV. Thinking positively is one most successful psychological strategies to deal with problems, and has been found to be useful in other studies into HIV and pregnancy (Liamputtong & Haritavorn, 2014; Ross, 2013; Chi et al., 2011; Youngwanichsetha et al., 2010).

Motherhood

Connected to the development of positivity was the way in which women adapted to the concept of *motherhood* and focus on their baby rather than stigma and negative attitudes from others. This drive also prompted them to face potential problems in the future such as caring for their baby alone if their husband left. This is embodied in the women’s belief that they “*do the best*” or “*do my best*” for themselves and their babies. This

process is reflective of the work of Miller (2009) on motherhood. She explained that a sense of motherhood relied on “what good mothers do”, it is about responsibilities and the right ways of doing things (caring) (Miller, 2009). Thinking about motherhood helped these Thai women desire to have a child, celebrate becoming pregnant and decide to keep the baby rather than terminating pregnancy. And as in this study, Miller (2009) describes how during pregnancy health care professionals can help foster a sense of motherhood. In addition, positive feeling about motherhood was identified to be the protective factors of the pregnancy experience and motherhood among young mothers living with HIV (Vescovi et al., 2014). In short, motherhood, combined with their Buddhist beliefs, was one of the key factors that help women in this study shift from fears and suffering regarding to HIV/AIDS disease to living with hope and purpose for their babies. This process reflects other research by Leyva-Moral et al. (2017) and Fletcher et al. (2016).

Bonding

Another element of adaptation was the bond that women developed with their unborn child. Feeling the baby growing bigger and sensing movement of the baby in their womb were factors in this. These feelings intensified a commitment between the woman and the baby as a mother. The literature is quite clear that the bonding between mother and unborn baby can predict a good pregnancy and a positive relationship between mother to baby (Liamputtong & Haritavorn, 2014; Willcocks et al., 2016). However, this relationship depends on whether the baby or pregnancy was planned and/or wanted, (Stern, 1998).

In short, in coming to accept and adapt to their pregnancy, maternal responsibilities, motherhood and bonding these women were prompted to improve their lives, develop a great sense of being alive, make sense of doing the right thing and knowing who they want to live for – elements seen in other research into maternal health and wellbeing (Miller, 2009; Barns & Murphy, 2009; Liamputtong & Haritavorn, 2014; Leyva-Moral et al., 2017).

Adapting to husband as positioning a relationship with her husband

Prior to their HIV positive being discovered and accepted by their husband the women in this study prepared themselves to accept any negative relationships outcomes. The thought, *“What will be will be”*, guided this preparation. Their goal was to lessen current tensions and it was a way to prepare them for bad news in the future. Moreover, *“What will be, will be”* or *“Let it be”* is also linked to other strategies in the decision making process model in this study – for example, the category of accepting and adapting, *“Thinking positively”* and the concept of *“Karma”*. Indeed, these strategies have been found in other studies where people are Buddhists (Thiangtham & Bennett, 2009; Chi et al, 2011; Liamputtong & Haritavorn, 2014) where similar terms to the above are used – for instance *“throwing the dices”* to consider their pregnancy with HIV positive and to deal with the unpredictable nature of HIV transmission to the baby (Sheri et al., 2004).

7.1.7 Discussion on the core category: The process of ‘balancing’

The core themes of this grounded theory come from the main concerns of the participants about their situation and how they navigated the pregnancy journey – how they thought about the factors involved and also the stages of that journey (Charmaz, 2006). Along that journey, through these stages, the concept of ‘balancing’ was identified as the process by which these women made the decisions they did. Each stage of the journey through pregnancy presented women with the need to balance and weigh the factors related to that particular step. Irrespective of what the decision was, the stages were constant for all women as was the process of ‘balancing’. This study found that *fear*, to *disclose or not disclose HIV* and *information* were important factors in the decision to have a child, become pregnant, keep the pregnancy, accept the decision and adapt to the decision.

7.1.7.1 Balancing on feelings of fear

Fear of disclosure

One of the most significant concerns women had was the fear of HIV disclosure to their husband. This fear was almost overwhelming in the women whose husbands did not know their HIV positive status; the women needed to conceal because they feared the negative outcomes which related to HIV disclosure. The fear of HIV disclosure to her husband and keeping control of this secret was at its highest level at the time of a “*loss of control*” when, for many women, their HIV status was revealed to husbands by women themselves or nurses at the ANC clinics, this thesis called this point the “*HIV disclosure crisis point*”. It was a crisis point because there were many emotional

reactions from women, husband and nurses, women were very upset, feeling guilty, uncertain, with one woman (Tukta) having suicidal thoughts. To cope with this women would balance the pros and cons of disclosure and use this to try to keep control of this information – using this women judged the best time to disclose their HIV status. Feelings of fear related to HIV disclosure has also been described in the Thai and international literature. For example, in Thailand, Ross et al. (2007) studied the lived experiences of newly diagnosed HIV positive pregnant women who perceived their lives as a “struggle” after HIV infected and during pregnancy with most women keeping their HIV positive status from others - making them feel overwhelmed and alone. Thiangtham et al. (2003) also found that women who living with HIV experienced a dilemma about whether to disclose their status to close family or their husband or family. Internationally studies, such as the one by Hardon et al. (2012) found that most of HIV positive pregnant women (79%) keep their status secret, only 37% disclosed to their partner and some studies found women’s HIV disclosure to partner or family members did link to decisions about their pregnancy (Kisakye et al.,2010; Carter et al., 2013; Demissie et al., 2014; Hernando et al., 2014). However, none of these studies examined the process by which these women decided to disclose or not.

Fear of HIV transmission to her baby

Women were aware that this was a risk but had to balance this against their desire to have a child. They sought information to help them balance these two factors – much of it from the ANC. They also had to factor in the concerns they had about the potential effects their HIV medication would have on their baby. This issue has also been found to be important in several studies internationally (Cooper et al., 2007; Ross

et al., 2007; Kanniappan et al., 2008; Sanders et al., 2008; Barnes & Murphy, 2009; MacCarthy et al., 2012; Demissie et al., 2014; Liamputtong & Haritavorn, 2014).

Fear of stigmatisation

Women also feared social stigma and discrimination. Women had to weigh and balance the consequences of revealing or concealing their pregnancy and HIV status throughout their pregnancy process. Stigma is a significant part of living with HIV and has been reported widely (Cooper et al., 2007; Kanniappan et al., 2008; MacCarthy et al., 2012; Nattabi et al., 2012; Demissie et al., 2014;) however, the need for support and health care for HIV related pregnancies is also relevant and linked to women's and their babies health (Kanniappan et al., 2008; Hanh et al., 2009; Hardon et al., 2012; Ross et al., 2012; Thurling & Candice, 2012). This study shows how women must balance and weigh these issues and expands and contributes to other work that shows the difficult decisions women who living with HIV have to make – especially around pregnancy (Myer et al., 2005; Ross et al., 2007; Visser et al., 2008; Hanh et al., 2009; Ross et al., 2009; Darak et al., 2012; Ross et al., 2013; Liamputtong & Haritavorn, 2014).

Fearing the social and economic consequences of pregnancy

Women feared the effect of pregnancy on their financial and social position. In Thailand and around the world, many studies indicated that many women avoided being pregnant because this would bring many problems (Squire, 1993; Ross et al., 2007; Hanh et al., 2009; Thiangtham & Bennett, 2009; Ross et al., 2012; Liamputtong & Haritavorn, 2014). Many women in Thailand experience socioeconomic difficulties

for example, low educational and income levels, being dependant on the husband's money, limited decision and power due to male dominated in families and society. These problems would be exacerbated if they became pregnant with HIV (Sae-Han, 2002; Boonpongmanee et al., 2003; Thiangtham et al., 2009; Youngwanichsetha et al., 2010; Ross et al., 2007, 2012, 2013; Liamputtong et al., 2014). These are key issues which women, especially women with HIV face around the world and are widely reported (Cooper et al, 2007; Nóbrega et al., 2007; Sanders et al., 2008; Gogna et al., 2009; Marcellin et al., 2010; Loutfy et al., 2012; Huntington et al .,2013; Hernando et al., 2014). This grounded theory study reveals how these fears are managed within the pregnancy decision making process.

7.1.7.2 Balancing information

HIV treatment and mother to child transmission

The perception of the effectiveness of ARV (before women became pregnant) played both a positive and negative role in the decision making process and women had, again, to take a balancing approach. The positive aspects of ARV were the women having hope, improved health and the feeling of being able to live longer. However, the negative aspects meant that women using ARV their health status was better and sometimes they had unprotected sexual intercourse which could spread HIV to others. Other negative aspects were the fact that the need to take medication regularly made life difficult for the women who had not yet disclosed their HIV status to their husbands or family. These factors are seen in the literature, for example in studies by Kisakye et al. (2010), Rujkornkan et al. (2011) and Mmbaga et al. (2013) - although

this work does not explore how these issues affect the wider pregnancy decision making process.

Women were also concerned about the risks of infecting their baby and some considered an abortion (although abortion attempts were also linked to fear of disclosure too). There is evidence women with HIV consider this option (Youngwanichsetha et al., 2010; Chi et al., 2011; Kavanaugh et al., 2013; Ross et al., 2013; Liamputtong & Haritavorn, 2014). However, women also came to realise that their ARV would reduce the risk of transmission – particularly when they sought ANC advice – and this was a major factor in the decision of the many women to continue the pregnancy. These information issues have been identified in other studies (Chi et al., 2011; Cogna et al., 2013; Liamputtong & Haritavorn, 2014) but not in a way that integrates them into the wider scope of pregnancy decision making process, or explores them in an in-depth qualitative manner.

Contraception and safer sex information

The lack of good contraception and safer sex services and counselling was seen, by some women, as a factor. Indeed in Thailand there have been concerns about the availability and quality of sexual health services (Rujkornkan et al., 2011; Liamputtong & Haritavorn, 2014; Bureau of Policy and Strategy, Ministry of Public Health, 2015). In addition women with HIV were faced with a concern that if they discussed issues such as becoming pregnant with their health care providers in the HIV services they faced potential negative reactions. This issue is supported by the work of Barnes and Murphy (2009: 484) who found medical providers can have negative attitudes towards

HIV+ women having a child; “*you shouldn’t have a baby*”. However, after becoming pregnant women accessed the ANC clinic service. At this point the staff played a significant role in helping the women to cope with their pregnancy. At this stage, women also got more information on m-c transmission and the positive effects of taking ARV. This new support and information ‘**tipped the balance**’ for the women regarding their feelings and decisions about their pregnancy. Several studies identify the support that specialised HIV ANC staffs provide for women (Myer et al., 2005; Tyler-Viola, 2007; Hanh et al., 2009; Gay et al., 2011; Ngure et al., 2012; Kelly & Reid 2013; Zhang et al., 2012; Rujumba et al., 2013; Moodley & Cooper, 2014) – this grounded theory helps explain how and where in the pregnancy decision process this information and support has an effect.

7.1.7.3 Balancing HIV concealing with disclosure

A crucial balancing process that women managed throughout the pregnancy process was the issue of disclosure versus non-disclosure of their HIV positive status. Should women disclose HIV or not? If so or if not; when would the right time be? This study found that HIV concealing and disclosure was linked to the process of “*controlling*”. According to the model, this started with concealing *HIV positive status* in category 1; in this stage women balanced the pros and cons of concealing (drawing on their fears and knowledge levels at the time) and if concealing was better than revealing, they could control this information and not disclose at this time - which most of women (11 women) chose to do. In category 2; the *desire to have a child* and; category 3 *becoming pregnant* and category 4; *keeping or terminating pregnancy*, women who did not tell husbands of being HIV positive decided to keep control of their HIV status

information. They were still balancing fear and information until they became pregnant, decided to keep pregnancy and then chose to tell their husband about being pregnant, and, via the ANC clinics, informed him of their HIV positive status. Disclosure of HIV status to a partner is described as a source of great stress in numerous studies. For example research by Thiangtham et al. (2009), Kisakye et al. (2010), Ross et al. (2012), Hardon et al. (2012), Carter et al. (2013), Demissie et al. (2014) and Hernando et al. (2014), all highlight that women with HIV face this dilemma. However, although identifying this as a key issue these studies do not explore in any detail the process by which pregnant women chose to disclose or not disclose - an aspect that this grounded theory contributes towards.

7.2 Section 2: Decision making theories and their relationship to this grounded theory of HIV positive pregnancy decision making

Very few studies were found in international publishing which attempted to theorize pregnancy decision making in general and/or in a specific HIV context. Some studies, found that women who living with HIV made their decisions based on wanting a child; desire for a child, desire for a child of a different sex, prior child loss, prior abortions for example (Kisakye et al., 2010). Similar to Barnes and Murphy (2009) found that women's decisions were based on their judgment of the relative weight of positive aspects of motherhood versus the often negative pressures of social and public opinion. In addition, women's partner and family members including husband, parent, siblings and in-laws wanted children (Oosterhoff et al., 2008; Beyeza-Kashesya et al., 2010; Chi & Rasch, 2011;), and women wanting to form a family are the reasons to have children (Hernando et al., 2014). However, unlike this study, none of this work

attempted to analyse and describe the pregnancy process in HIV from start to completion – or develop a conceptual theory of the process.

7.2.1 Theorising pregnancy decision making

Four studies were found which attempt to theorize pregnancy decision making process around pregnancy that are closely related to this study. The next section describes each study in detail and outlines the similarities and, importantly, the differences between them and this study on pregnancy decision making.

Barrett and Wellings (2002)

This UK study explored how HIV negative pregnant women describe their pregnancy in terms of planned/unplanned, intended/unintended, wanted/unwanted pregnancy. They found that in general, the term “planned” and “unplanned” were preferred by women. Of the 43 women the terms “intended” and “unintended” to describe their pregnancy 11 women referred to their pregnancy as “planned”, 29 applied “unplanned”, 8 applied “intended”, 14 applied the terms “unintended”, 15 applied “wanted” and 8 applied “unwanted”. In addition, women who used the term “planned” had 4 criteria in common:

- 1) They had had a clear intention to become pregnant
- 2) They had not used contraception in order to become pregnant
- 3) They had all discussed and agreed with their partners that they would try to conceive
- 4) They had all made wider life style preparations/ reached the right time in their life (e.g. got married, got the right job/house etc.)

This UK study described the meanings attributed to the start of their pregnancy among HIV negative women. Some findings relate to this study of Thai women who living with HIV in that 4 of the women meet the criteria for a ‘planned pregnancy’. However, the key difference between this study and the grounded theory presented in this thesis is that this study only looked at the first element of the pregnancy journey – simply concentrating on the ‘becoming pregnant’ part. It did not continue through the pregnancy process or attempt to present any theoretical explanations of the decisions the women subsequently took regarding the rest of their pregnancy.

Barnes and Murphy (2009)

This feminist, grounded theory study focussed on the reproductive decisions of 80 women living with HIV of childbearing age in the United States over 5-years. They describe how women made their reproductive decisions based on their judgment on the positive degree of motherhood and the negative pressure of social opinion against their desire to have a child. Pregnancy decisions amongst these women weighed between “*forces against choosing pregnancy and reasons for choosing pregnancy*”; forces against included women perceiving the negative attitudes from public opinion, medical providers, family and other women who living with HIV about becoming pregnant. The positive influences for having a child were mothering as a social value and their spiritual beliefs.

The similarities between Barnes and Murphy’s (2009: 484) work and this thesis are the interplay between the social/cultural and personal influences. Social opinions on HIV such as “*you shouldn’t have a baby*” occur in both studies as do the issues of

motherhood and religious beliefs. There is also the process of competing negative and positive aspects. However, this grounded theory study offers a more complete look at the whole pregnancy decision process – including decisions about abortions, the issues around the disclosure of HIV status, the role of the ANC, a more detailed look at religious reasoning for a pregnancy and the specific way in which women adapt and adjust their pregnancy. In short, it is proposed that this grounded theory study offers a more detailed and extensive depiction of the HIV positive pregnancy decision process than Barnes and Murphy's (2009) study. In addition, Barnes and Murphy's study was also undertaken in a culture very dissimilar to Thailand.

Chi et al. (2011)

Chi et al. (2011) studied pregnancy decision-making among 20 women who living with HIV in Northern Vietnam using ethnography. The participants in the study were 10 women who had known their HIV positive before becoming pregnant and 10 women discovered their HIV positive status after getting pregnant. The main findings were that 13 out of the 20 women decided to have an abortion and 7 women kept their pregnancies. However, it's not clear in the study as to which group the women who chose an abortion came from so it is difficult to infer much in relation to comparisons with the grounded theory in this thesis where all the women knew their status before becoming pregnant. In terms of factors related to decision making some women made their own decisions whilst others complied with wishes of others; most often their husband, relatives and health care providers. Chi et al. (2011)'s study was similar to this thesis on the point of recognising the role of other significant people in the decision

making process. Both studies have support each other to the extent that HIV positive women's decision making is influenced by social norms of family, gender and kinship.

However, there were some significant differences between the research in this thesis and Chi et al. (2011)' work. Firstly, the numbers of women deciding to have an abortion in the Vietnam's study were 13 of 20 while in this Thai study were 3 of 15. This difference might be that in Vietnam abortion is legal, pregnant women with HIV positive would have more options than in Thailand where abortion is illegal. Although the national religion in both countries is Buddhism and abortion is against its social moral and beliefs, abortion policy was one of the main factors that affected pregnancy decisions and choices among Thai women. Secondly, the Vietnam study studied the decision of women who learned about their HIV positive status both before *and* during pregnancy whilst this thesis studies women who already knew they were HIV positive before becoming pregnant – making them two very different populations. Furthermore, Chi et al. (2011) did not explore the role of partners/husbands, look at the issue of HIV disclosure or the role of health providers in the ANC clinic in the decision making process.

Youngwanichsetha et al. (2010)

Youngwanichsetha et al. (2010) used grounded theory to explore the decision making process that 38 -HIV positive Thai women used to either keep their pregnancy or seek an illegal abortion. The study presented a model of decision making with the core category is "*Weighing stress*" divided into 3 sub-categories. 1) Being ambivalent about continuing pregnancy and considering an abortion; 4 codes; being concerned Mother To

Child Transmission (MTCT), considering the desire to have a child, preferring to keep the child, and considering an abortion. 2) Exploring alternative options such as seeking information, services and emotional support, discussing concerns and decision making with health providers, husbands and family members, trying to seek an abortion, considering the use of ART and offering the child for adoption. 3) Selecting the appropriate choices was appraising the influencing factors, deciding between continuing the pregnancy and terminating the pregnancy, and adapting the mind to the decision.

The study of Youngwanichsetha et al. (2010) differs from the model offered in this thesis because they included both women who discovered they were HIV positive before (8 women) and after becoming pregnant (30 women). Furthermore, the study focussed on the decision to either keep the baby or seek an abortion and did not seek to explain all the other decision aspects throughout the rest of the pregnancy.

7.2.2 Fit with generic health decision making models

This section discusses how the grounded theory presented in this study contributes to our understanding of general health decision making theories. This study is the first to empirically test two of the most commonly used health decision makings models – the Health belief Model and The Theory of Reasoned Action/ Theory of Planned Behaviour Model in the field of HIV pregnancy decision making.

1. Health Belief Model (HBM)

The Health Belief Model (HBM) by Becker (1974) has been applied to all study all types of health behaviour and decision making. This model attempts to predict health-

related behaviour in terms of certain belief patterns. The concept is based on a person's motivation to undertake health behaviour related to three main categories: individual perceptions, modifying behaviours, and likelihood of action. Individual perceptions are factors that affect the perception of illness or diseases, people deal with the importance of health to the individual, perceived susceptibility, and perceived severity (University of Twente, 2017a).

Perceived Susceptibility:

Perceived Susceptibility is one's opinion of the chances of getting a condition (Glanz et al., 1997). Individuals vary widely in their perception of susceptibility to a disease or condition (University of Twente, 2017a).

Perceived Severity:

One's opinion of how serious a condition and its consequences are (Glanz et al., 1997).

Perceived Benefits:

Is one's belief in the efficacy of the advised action to reduce risk or seriousness of impact.

Perceived Barriers:

One's opinion of the real and psychological costs of the advised action (Glanz et al., 1997). Barriers relate to the characteristics of a treatment or preventive measure may be inconvenient, expensive, unpleasant, painful or upsetting. These characteristics may lead a person away from taking the desired action (University of Twente, 2017a).

Cues to Action:

Strategies to activate "readiness" (Glanz et al., 1997). An individual's perception of the levels of susceptibility and seriousness provide the force to act. Benefits (minus barriers) provide the path of action. However, it may require a 'cue to action' for the desired behaviour to occur. These cues may be internal or external (University of Twente, 2017a).

Self-Efficacy:

Confidence in one's ability to take action (Glanz et al., 1997).

Table 7.1 illustrates the fit of this grounded theory to the HBM – and how it relates to the women's decision making around their pregnancy.

Table 7.1: Health Belief Model applied to pregnancy decision making

Concept	Decision to become pregnant in HIV+ women (who planned to have a child in advance)	Decision to become pregnant in HIV+ women (who did not plan to have a child in advance)
1. Perceived Susceptibility	<ul style="list-style-type: none"> - Women believe that they can become pregnant even though HIV positive. - Women believe that they should disclose HIV+ status to their husband before pregnant. -Women believe that they would have at least one baby with a current partner one day. 	<ul style="list-style-type: none"> - Women believe that they would have not become pregnancy this time. - Women believe that they should keep HIV+ status secret as long as possible. -Women believe that they would have at least one baby with a current partner one day.
2. Perceived Severity	<ul style="list-style-type: none"> - Women believed that a baby would not be infected. - Women believed that they would have negative outcome and consequences of HIV disclosure. -Negative outcome and consequences of becoming pregnant (abandonment from partner, stigma from partners and family, economic problems, baby getting HIV, husband getting HIV). These negative outcomes are the factors on whether to keep or terminate the pregnancy. Or whether to have a child or not. 	<ul style="list-style-type: none"> - Women believe that unplanned or becoming pregnancy earlier than expectation would lead to: baby getting HIV, husband getting HIV and negative outcomes and consequences of HIV disclosure. -Negative outcomes and consequences of becoming pregnant (abandonment from partner, stigma from partners and family, economic problems, baby getting HIV, husband getting HIV). These negative outcomes are the factors on whether to keep or terminate the pregnancy. Or whether to have a child or not.

Concept	Decision to become planned pregnancy in HIV+ women	Decision to become unplanned pregnancy in HIV+ women
3. Perceived Benefits	<p>-Women believe that ART and PMTCT would protected their babies and partners from contracting HIV.</p> <p>- Women believe that having at least one child would have been better than none.</p> <p>-Women believed that their husband would accepted their pregnancy and HIV when told.</p>	<p>-Women believe that ART and PMTCT would protected their babies and partners from contracting HIV.</p> <p>- Women believe that having at least one child would have been better than none.</p> <p>-Women believe that their husband would not accept their pregnancy and HIV if told.</p>
4. Perceived Barriers	<p>-Women identified their personal and social barriers such as social beliefs about HIV+ pregnant women, stigma from partners and family, stigma and prejudice from their health care providers, abandonment and negative outcomes from HIV disclosure and pregnancy.</p>	<p>-Women identified their personal and social berries such as social beliefs against HIV+ pregnant women, stigma from partners and family, stigma and prejudice from their health care providers, abandonment and negative outcomes from HIV disclosure and pregnancy.</p> <p>-Women were not sure whether they and their pregnancy would be accepted by their husband.</p>
5. Cues to Action	<p>-Women received HIV screening and advice from ANC to bring their partner to clinic for an HIV test.</p> <p>- Women received advice and information at ANC to inform their partners and plan for further treatment for individually, baby and partners.</p>	<p>-Women received HIV screening and advice from ANC to bring their partner to clinic for an HIV test.</p> <p>- Women received advice and information at ANC to inform their partners and plan for further treatment for individually, baby and partners.</p>
6. Self-Efficacy	<p>-Women decided to tell their HIV status to their partners and accepted any consequences from HIV disclosure and pregnancy from that point – this was facilitated by the ANC.</p>	<p>-Women decided to tell their HIV status to their partners and accepted any consequences from HIV disclosure and pregnancy from that point - this was facilitated by the ANC.</p>

2. Theory of Reasoned Action (TRA)/ Theory of Planned Behavior (TPB)

Ajzen and Fishbein formulated the theory of reasoned action (TRA) in 1980, later adding perceived behavioral control to develop the theory of planned behavior (TPB) (University of Twente, 2017b).

Health behaviours including the pregnancy decisions made by women who living with HIV can be related to the TPB and provide an empirical test of this theory in this area of HIV. The theory states that people's behaviour is influenced by their personal beliefs and attitudes toward the behaviours and by social factors such the influence of significant others. This theory fits with a constructivist of grounded theory (Charmaz, 2006) as a constructivist believes that a person's attitudes and acts are shaped and constructed by personal and social processes. Similarly, the TPB believes that personal beliefs are influenced by normative beliefs and subjective norms about a certain behaviour or action (Ajzen, 2002; Natan & Kuttygaro, 2015). In this study significant others often have a considerable influence on women's health behaviours. Women's decision making whether to have or a child were influenced by significant others such as partners, family members, community and health care providers - with women in this study indicating that the husband or partner was the most significant person that made them decide to have a child or not. In addition, the grounded theory in this study shows that involvement of significant others occurs along the pathway of decision making and in each category; such as women's the desire to have a child, keep pregnancy and bring husband to HIV screening at ANC.

The Theory of Reasoned Action suggests that a person's behavior is determined by his/her intention to perform the behavior and that this *intention* is, in turn, is a function of his/her *attitude toward the behavior* and his/her *subjective norm* (Ajzen, 2002; University of Twente, 2017b).

Intention performs behaviour:

The best predictor of behavior is intention. Intention is the cognitive representation of a person's readiness to perform a given behavior, and it is considered to be the immediate antecedent of behavior. This intention is determined by three things: *their attitude toward the specific behavior, their subjective norms and their perceived behavioral control* (Ajzen, 2002; University of Twente, 2017b).

The intention to have a child and making decisions within each step in this study fits closely to the TRA. This intention is determined by person's attitude toward the specific behaviour, by subjective norms and by perceived behavioural control (Ajzen, 2002). In this study, intention is determined by a woman's attitude towards specific behaviours, such as disclosing or concealing HIV status, the desire to have a child with a current husband one day and keeping or terminating the pregnancy.

Person's attitude toward behaviour:

The theory of planned behavior holds that only specific attitudes toward the behavior can be expected to predict that behavior. In addition to measuring attitudes toward the behavior, we also need to measure people's subjective norms – their beliefs about how

people they care about will view the behavior in question. To predict someone's intentions, knowing these beliefs can be as important as knowing the person's attitudes (Ajzen 2002; University of Twente, 2017b). In this study this is represented by such decisions, as in category 1, the attitude towards the pros and con of HIV disclosure is predictive of subsequent behavior.

Perceived behavioral control:

Perceived behavioral control influences intentions. Perceived behavioral control refers to people's perceptions of their ability to perform a given behavior. These predictors lead to intention. A general rule, the more favorable the attitude and the subjective norm, and the greater the perceived control the stronger should the person's intention to perform the behavior in question (Ajzen, 2002; University of Twente, 2017b). Perceived behavioral control in the context of the women in this study refers to women's perceptions of their ability to perform a decision in each step and along the whole processes. For example, women's ability to control and perform behavior is seen within the "control of HIV positive concealing to husband" aspect of the process.

Person's subjective norms:

Pregnant women accepting HIV infection, becoming pregnant, keeping pregnancy and adapting to consequent results are shaped and influenced by religion/Buddhism beliefs such as "Karma". Leyva-Moral et al. (2017) argue that pregnant women living with HIV are influenced by societal beliefs, values and experiences. Subjective norms are the individual's perceptions of the social pressure to perform or not perform behaviours (Ajzen & Fishbein, 1980; Natan & Kuttygaro, 2015). Women perceived Thai people's

attitudes around them that those people believe that “*women who living with HIV should not have a child or becoming pregnant*”. This opinion is confirmed by other international and Thai context (Boonpongmanee et al. 2003; Thaingtham et al., 2003, 2009; Ross et al., 2007, 2009; Barnes & Murphy, 2009; Youngwanichsetha et al., 2010; Chi et al., 2011; MacCarthy et al., 2012; Leyva-Moral et al., 2017). So, if women desire to have a child, they know this desire may go against social norms and they need to weigh their desire against people’s opinions. Indeed, this aspect is found in other studies of women who living with HIV who report this kind of tension (Cooper et al., 2007; Kanniappan et al., 2008; Sanders, 2008; Barnes & Murphy, 2009; Youngwanichsetha et al., 2010; Chi et al., 2011; MacCarthy et al., 2012; Demissie et al., 2014; Liamputtong & Haritavorn, 2014; Leyva-Moral et al., 2017). This study has added to our understanding of how women may navigate this issue.

Thai social norms were also including “telling lies is bad Karma (or sin)’ (Thiangtham & Bennett, 2009; Chi et al, 2011; Liamputtong & Haritavorn, 2014). However, some women in this study chose to conceal their HIV positive status until ANC. Hence, they went against a social norm related to lying because they feared the stigma and discrimination more than the bad karma created by deceit.

To sum up, this grounded theory study has provided an empirical test of two of the main health decision making models using HIV and pregnancy as a case study – it has found that these models are robust and also given clear examples from an HIV perspective of the way they fit with HIV pregnancy related decision making.

7.3 Conclusion

This study investigated the decision making processes to become pregnant and have a child among HIV positive Thai women using grounded Theory. This chapter has shown how this model fits with and contributes to the international and national literature on HIV and pregnancy. This study contributes a whole decision making process model which can be used to understand the pathway and steps of the decision making process around pregnancy in women who living with HIV. The model illustrates not only the process of decision making but also highlights the main stages, issues and concerns of women living with HIV wanting a child. It makes several contributions to the knowledge base around HIV and pregnancy and can serve as starting point for conceptually understanding the pathways and issues facing women living with HIV considering or progressing through a pregnancy. The next chapter will conclude the thesis by revisiting the issues of reflexivity and rigour and also discuss the limitations of the study and the implications for research, health policy and clinical practice.

Chapter 8

Conclusion

This chapter is divided into 3 sections; the first provides a brief summary of the thesis outcomes as well as setting out the contribution this study makes to knowledge. The following section explores issues of rigour and the strengths and limitations of the study. The final section will outline the recommendations for health policy around HIV maternal care, clinical practice and further research.

8.1 Overview of the project and its contribution to knowledge

The origins of this study was in interest in why women who living with HIV wanted to become pregnant despite being HIV positive and the social stigma attached to both HIV and being pregnant and HIV positive? How did these women make their decisions? From experience and from the literature we can see that women with HIV face many challenges in their lives – where does the decision to become pregnant fit in with those challenges. Also, looking at the research there was a gap in the knowledge base on this issue. There were studies that looked at different aspects of pregnancy in HIV but none that set out to describe and conceptualise the whole social process of being HIV positive, deciding to become pregnant and then moving through the pregnancy process. This type of knowledge was missing and was the gap this study aimed to fill. The findings will be useful for the research community but also, it is hoped, also for health care providers working with women with HIV and, through them, hopefully informs and improve the care they deliver.

The research questions of this study were:

1. What is the decision making process to become pregnant in Thai women living with HIV?
2. What are the decisions Thai women living with HIV make throughout their pregnancy and how do they make them?

The purpose of the study and the research question informed the methodology used; a qualitative approach using a constructivist grounded theory (Guba & Lincoln, 1989; Guba, 1990; Patton, 2001; Charmaz, 2006; Patten, 2007; Creswell, 2007; Parahoo, 2014). The main outcome of the study is the conceptual model of this decision making represented and discussed in **chapters 6 and 7**.

The unique of contribution of this study

This study makes a substantial contribution to the understanding of the lives of HIV positive pregnant women. These contributions are;

1. This study presents, through Grounded Theory, a unique model that explains in detail the HIV related pregnancy decision making process. This is the first conceptual model of this kind and can be applied and refined by researchers in other settings to expand our understanding of how HIV positive pregnant women make decisions.
2. The model identifies and links the ‘stages’ in the pregnancy decision making process and therefor highlights the key times or ‘crisis points’ faced by HIV positive pregnant women. This model incorporates lots of different foci of

research on HIV and pregnancy and places it in a conceptual model for the first time. It can now be used by health care professionals to anticipate crisis points for women living with HIV in their care and intervene appropriately and positively.

3. It adds to the understanding of issues around disclosure of HIV status and provides a unique analysis of how HIV positive pregnant women manage their HIV information. Again, this can be used by researchers and health care providers in their work. It particularly adds to the work of Youngwanichsetha et al. (2010) and Vietnam study; Chi et al. (2011), in extending the knowledge base about HIV positive pregnancy in South-East Asia.
4. It provides a unique empirical example of both the Health Belief Model and Theory of Reasoned Action within the sphere of HIV pregnancy decision making – no study has applied these theories to HIV and pregnancy and this study provides a detailed presentation of the way HIV pregnancy decisions can be mapped to the components of both models. It also contributes to the empirical evidence of the robustness of both theories in understanding health related decisions.
5. The process of balancing adds to the understanding of how pregnant women with HIV navigate the issues of stigma, ARV treatment, maternal transmission, abortion and others as they move through the pregnancy process. It also reinforces the research that demonstrate the importance of good, non-judgmental ANC care is for women – and also highlights that there is still work to be done on some health care providers attitudes towards HIV and pregnancy.

8.2 Strengths and limitations

All studies have their strengths and limitations and this one is no different. The next sections will use reflexivity, the rigour tests of Charmaz and a discussion of the methods of the study to outline the strengths and rigour of this research and also discuss its limitations.

8.2.1 Reflexivity and rigour

Reflexivity

According to Charmaz reflexivity is: *“a reflexive stance is explicitly recommended informing, how the researcher conducts the research, relates to research participants and represents them in written reports”* (Charmaz, 2006;189). The purpose of this reflexivity section is to address the following questions; “How did reflexivity occur within the study? Who was involved in this process, and how was the study “kept on track and remain valid?” In order to do this, the rigour and authenticity tests and procedures of constructivist grounded theory, advocated by Charmaz (2006), will be used as a framework.

Rigour and Constructivist Grounded theory (CGT)

Charmaz proposes 4 domains with criteria that relate to the rigour of a CGT study; credibility, originality, resonance and usefulness. **Table 8.1** describes a summary of these and the techniques used in this study to address them.

Table 8.1: Rigour of the study

Charmaz's rigour domains	Establishing rigour in this study
Creditability	<ul style="list-style-type: none"> - Using constant comparative method for creditability and originality. When a strong combination of creditability and originality is settled then the resonance will be increased, because creditability and originality increase resonance (Charmaz, 2006). - Using multiple sources of data (women and nurses) to establish creditability. - Using member checking (3 out of 15 participants, 6 nurses) - Using peer debriefing (2 academic supervisors) for creditability and dependability.
Originality	<ul style="list-style-type: none"> - Categories were from the significant coding and concerns of women, and were coded line by line and focused coding of transcriptions for originality. - Using a bilingual translator to double check of bilingual transcriptions for originality. - Using the constant comparative method for originality and creditability.
Resonance	<ul style="list-style-type: none"> - Using member-checking by 3 out of 15 participants to recheck, refine, extend and confirm the given data and categories. - Using the constant comparative method to increase resonance.
Usefulness	<ul style="list-style-type: none"> - The substantive model produced (product) reflects its usefulness.

According to Charmaz's ideas relating to rigour, there are 19 questions within the 4 domains. Charmaz (2006) does not advocate that a study should be able to address all of them, but the rigour of a study can be judged against a range of these questions. The following section expands on table 8.1 and gives detailed account of the rigour processes used in this study.

8.2.1.1 Creditability

- Has the research achieved an intimate familiarity with the topic or topic?

In this study, the topic is about HIV positive Thai women's decision making processes around becoming pregnant. The main objective was to explore and understand the processes and influences underpinning decision to become pregnant and have a child in women who living with HIV. A substantive model is the main finding which has been generated by grounded theory method.

- Are the data sufficient to support the results?

Themes are robust and well supported by data. Each stage of the model is grounded in the data. Data collection and analysis continued until saturation was achieved.

- Has the researcher made systematic comparisons between categories?

Systematic comparisons in this study were done to compare the similarities and differences between categories from case to all cases. This comparative method began from the earlier interviews and coding. The constant comparative method was used code

by code and incident by incident to determine when emerging and comparing categories and concepts became a substantive theory/model.

- Do the categories cover a wide range of empirical data?

Yes, a significant number of in-depth interviews generated a large amount of data. These data were used to build the theoretical model. The analysis process and presentation of the findings using paradigm quotes from participants demonstrates this range of data.

Member checking

Member checking is one of the ways to establish validity. In this study I returned to the fields to meet 3 participants (Buraya, Malee and Muay) with whom I shared the emerging substantive model visually in a diagram and also by discussing it with them. In this recheck process the participants confirmed and gave suggestions I used to refine the selected categories and also guide more interviews. From the 15 participants 3 women were chosen from different backgrounds to be representative respondents to recheck and confirm given data. For example; Buraya was recalled to represent women who disclosed their HIV status before becoming pregnant, women for whom this was their first pregnancy, women who got HIV from their mother and who had not sought an abortion; Muay represented the women who concealed their HIV status until the ANC, women who had more than 1 child, women who got HIV from an ex-partners. Malee represented women who got HIV from a current partner and had attempted an abortion.

Small group discussions also took place with nurses from the ANC where the findings of the study were presented. There were 2 small group discussions in the ANC clinic A (4 nurses) and Clinic B (2 nurses). Similar to the process with participants, I shared the overview of categories, my interpretations and the substantive model. The nurses did not challenge the model and discussed the findings and also the implications of the research for HIV ANC care.

Peer debriefing

The de-briefers in this study were the two academic supervisors who helped me to recheck the quality of the process and outcomes of the study. Supervision discussions enabled me to present my work and discuss the emerging codes and categories from the data. These discussions helped me develop my theory and helped me strengthen it by agreeing the direction of further data collection and analysis. This process also provided a quality control on my analysis of the data to ensure the richness was there and also the data analysis was faithful to the data.

Constant comparative method

The comparative method in this study was used to compare the similarities and differences between categories from case to all cases. This began from earlier coding from the first interview to theoretical saturation following further interviews. Comparison of all data to data, code by code and incident by incident helped to determine and know that when emerging and comparing categories and concept were strong enough and to become a substantive theory or model.

8.2.1.2 Originality

- Are the categories fresh? Do they offer new insights?

The categories in this theory do provide new insights on the HIV pregnancy decision making process. A significant example would be the elements and complexities within the decision making around HIV disclosure. The role of the ANC in the decision making process provides a fresh insight into HIV pregnant decision making also.

- What is the social and theoretical significance of this work?
- How does the theory challenge, extend, or refine current ideas, concepts and practices?

These 2 questions are addressed in the contribution to knowledge and practice parts (**heading 8.1**).

The other methods to increase originality are transcription quality and language accuracy and cross-check.

Cross-check by academic supervisors

This cross-check method is recommended for originality and credibility, in that single researcher should find another person who can cross-check the codes for what is called “*inter-coder agreement or cross-check*” (Creswell, 2009: 191). For a postgraduate researcher this checking can be undertaken by academic supervisor(s).

8.2.1.3 Resonance

Using member-checking by 3 out of 15 participants and 6 nurses to recheck, refine, extend and confirm categories, not only to recheck on data but also asking the participants about the model and its fit to the real world. Moreover, data comparison by constant comparative method was employed to increase resonance as described in earlier section.

8.2.1.4 Usefulness

According to Charmaz, the value of a substantive model is reflected by its usefulness. It is proposed that the findings in this study will be useful in the care provided to women who living with HIV. Understanding the decisions process they go through will contribute to the development of Ante Natal Care for women who living with HIV. The details of this will be set out later in this chapter.

8.2.2 Limitations of the study

- 1) Although I interviewed pregnant women of different gestational ages to reflect some issues, situations and decision of the past, present and plans for the future it is possible that some experiences would be recast by both time and environment.
- 2) This model constructed by pregnant women living with HIV and the researcher is based on data collected from 2 provincial hospitals (northeastern Thailand), this may be similar or different from other regions in Thailand.

3) This model constructed by pregnant women living with HIV and the researcher is based on the Thai context in which it was conducted. This may limit its generalisability to other settings, cultures and contexts.

8.3 Recommendations

This section sets out the recommendations that arise from this study for policy, practice and research.

8.3.1 Recommendations for policy

1) More ANC and HIV nurses are needed. The Thai government by Ministry of Public Health should seriously solve the problem of lacking health care staff especially doctors and nurses across the country. Comparing with many countries in Asia and South East Asia, Thailand has more population per 1 doctor and 1 nurse than many countries (Doctor=1:2,535, Nurse= 1:498). As a result those staffs are working hard to provide a service to large groups of patients. Moreover, many parts of services need experts who can take more time to advise patients on sensitive issues such as HIV in relation to reproductive health.

2) Continued investment and support for HIV/AIDS training among health professionals and efforts made to increase the numbers and skills of reproductive health counsellors.

3) The reproductive decisions and health rights of HIV couples need to be respected by policy makers and health care providers.

8.3.2 Recommendations for practice

1) Some of the women became pregnant by mistake/accident/unintended or unplanned because of lack of knowledge. Therefore, safer sex and contraceptive education to reproductive aged people who are living with HIV should address the issues around pregnancy and its prevention more fully.

2) Health care providers should help women who living with HIV to reveal their HIV status to their partner at the appropriated time and by an appropriate method. This advice would respect and balance the women living with HIV confidentiality and the rights of the partners to protect themselves from HIV through sexual intercourse with the partner.

3) Integrative services such as pre-marriage counselling, safer sex, antenatal and postnatal counseling related to maternal, child and partner's health should be provided systematically by a multidisciplinary team to women living with HIV and their partners.

4) The pregnancy decisions by women who living with HIV should be respected by health care providers. More training should be provided to prevent instances of judgmental care/remarks by health professionals.

8.3.3 Recommendations for further research

1) The model of Thai women living with HIV in this study could extend to cover similar groups or contexts and should be tested by qualitative, quantitative or mixed method studies.

2) Further research with the male partners of women living with HIV or female partners of men with HIV would add to the pregnancy decision making research field.

3) The model in this study focused on women living with HIV who knew their HIV positive before deciding to become pregnant. Further research with women who did not know their status will add a further dimension to HIV pregnancy related research.

8.4 Conclusion

This chapter has provided an overview of the thesis and explored how the tests of rigour can be applied to its methodology and findings. This is the first study to research in detail the decisions that HIV positive pregnant women in Thailand make before and throughout their pregnancy, indeed, it is the first study to look at this in detail internationally. This study has moved from the context, through the development of research questions to the use of a grounded theory method to produce a substantive theory of the issues these women face during their pregnancy. It has therefore provided a unique insight into this aspect of their lives and therefor contributes to the body of knowledge around HIV related health care and service provision.

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Appendix

Appendix A: Introductory letter

Introductory letter

Dear Participant (Pregnant women)

I am Jaruwan Kownaklai and I am studying on a Ph.D. programme in University of Hull, UK (Nursing studies). I am interested in understanding more about your decision-making processes and experiences of becoming pregnant. The health care team and your consultant in ANC have identified you to me.

I expect that my study will help Thai health care providers to better understand, respect and develop health care services for Thai women who are affected by a positive HIV status.

Before you decide to take part, you should understand why the research is being done and what it would involve to you. If you decide to take part I would be grateful. The participant information sheet about the study will be sent you to read and if you wish to take part, I will meet you to explain about my research once again.

Yours sincerely

Jaruwan Kownaklai

Ph.D.Student

Contact: 0894165257

Email:jaruwan.o@msu.ac.th; J.Kownaklai@2014.hull.ac.uk

Address: Faculty of Nursing, Mahasarakham University 44150.

Appendix B: Participant Information Sheet (In English language)

Participant Information Sheet (Pregnant women)

Title: Pregnancy decision making among Thai women living with HIV: a grounded theory study.

I am writing to you because I would like to invite you to take part in a research study. Importantly, before you decide to take part, you should understand why the research is being done and what it would involve for you. This leaflet provides important information about the study. Please take the time to read it and do ask any questions if you are unclear about anything, or want further information about the research and taking part. If you find reading this leaflet difficult, please do not hesitate to ask me to give you a verbal explanation of the information contained in it.

❖ What is the purpose of the study?

The purpose of the study is to improve understandings of how HIV positive pregnant women make decisions about becoming pregnant and how their families are involved in pregnancy decisions. The findings of the study will be used to provide evidence of how to improve health and social care systems delivering care and services to women who are living with HIV in Thailand.

❖ Who is doing this study?

My name is Jaruwan Kownaklai, my background is a nurse, midwife and a lecturer in the Faculty of Nursing, Mahasarakham University. I am undertaking a doctoral research degree at the University of Hull, UK. I expect that my study will help Thai health care providers to better understand, respect and develop health care services and the fertility decisions and reproductive health and rights among Thai women who are affected by their HIV status.

❖ Why have I been chosen? How many other participants will be involved?

You have been chosen because I would like to interview women living with HIV who become pregnant. I am interested in understanding more about your decision-making in becoming pregnant by exploring your real life story. In addition, but only with your consent, I would like to speak with one of your family members or significant others to know more about his or her opinion of your pregnancy. I will only meet with one of your family members/or significant others if you allow me to meet with them and only if you have already disclosed your HIV status to them and given your permission by signing the consent form. If not, I will not meet them.

I will be conducting around 15-20 interviews with other pregnant women and interviewing around 15-20 family members or significant others.

❖ Do I have to take part?

No. Your participation is completely voluntary. If you do decide to take part you can withdraw from the study at any time without giving a reason. The care you receive from the hospital and health care staff will not be affected in any way by your decision to decline to take part.

❖ What will happen if I take part?

If you are willing to take part, I would like to interview you about your decision-making around pregnancy and your experiences during pregnancy. I will interview you at least once but some participants may be approached for a second interview. Each meeting at which the interview will take place will take between 60-90 minutes. During the interview, I will listen to your experiences, your story, and your point of view. I would, with your permission, like to record the interview to keep an accurate record of our meeting.

❖ What is the topic that is being investigated?

The topic of the study is about how women who living with HIV make decisions to become pregnant and how their families or significant others are involved in these decisions. To investigate this topic, you will be asked some questions. The questions you will be asked will focus on subjects such as your pregnancy, your decision-making around becoming pregnant, and the how your family or others has been involved in your decisions.

❖ What are the benefits and risks?

Sometimes talking about your HIV status can be an emotional experience and it can also be upsetting. If it is, and you are in agreement, it may be necessary to refer you to talk to the hospital counselling team about how you are feeling. This will of course only be done with your agreement and permission.

The findings from the study will potentially be used to help health care practitioners to better understand and improve health care services for women and their families who are affected by HIV.

❖ How will you ensure the confidentiality of personal data?

Your real name and address will not appear in any reports of this research and it will not be possible to identify participants. The direct quotations from the interview may appear in the research report and other related papers but only without personal identifiable or detectable information. The research will only use an anonymous or pseudonymous name for participants.

The recordings of the interviews and all the transcriptions will be kept in a safe locked cupboard and/or on a computer that requires a password. The data from the interviews will only be seen by the researcher, the person checking the translation and the persons supervising the project. All raw data will be destroyed after the research report is completed.

On the rare occasion that an emergency arises for you or your baby, or if I become worried about you or your unborn baby's health or well-being, it may be necessary to consult with your healthcare team first to get you the right help without getting your permission first. In most situations however, nothing that you say will be shared with others unless you request someone help you.

❖ What will happen to the research results?

The study will be written up as a thesis in hard copy and this will be maintained by the University of Hull. I will use a part of the whole thesis for publication or academic conferences without your real name and address.

❖ Would you receive anything for taking part?

I will pay for your transportation such as your travel tickets or car fuel up to 100-300 Thai Baht (depending on travel distance) for travel to the interview.

❖ I would like to participate. What do I do now?

If you do decide you would like to take part in this study tell me directly, or tell your nurse or doctor and they will, with your permission, pass your name and contact details on to me. I will then contact you to explain the research objectives and you will be asked to sign a consent form before starting the interview.

Researcher contact details for further information

Contact number: 0894165257

Email: jaruwan.o@msu.ac.th

Address: Faculty of Nursing, Maharakham University 44150.

Appendix C: Consent form (In English language)

Consent form (All participants)

Title: HIV positive Thai women's decision making process around becoming pregnant: a grounded theory study.

I confirm that I have read and understood the information sheet which given by the researcher. I have had an opportunity to consider the information, asked questions and these had answered satisfactorily.

I understand that my participation is voluntary. So, I feel free to take part or withdraw in any times without my medical care or legal rights being affected.

I understand that any interview will be tape recorded and these tapes will only be listened to and transcribed by the researcher, the transcriptions be translated by the researcher and re-check by bilingual translator (Name.....).

I understand that my real name and address will not appear in any part of research report but will use instead anonymous or pseudonymous name. The direct quotations from the interview may appear in the research report and other related papers without personal identifiable or detectable information.

I agree to take part in this study.

.....

(Name of participant)

.....

(Signature)

...../...../.....

(Date)

Appendix D: Question guideline

Semi-structured question guideline

1. Demographic data

- Pseudonymous name of participant
- Age
- Marital status
- Religion
- Education
- Occupation
- Pregnancy history (G-P-A-L, GA, last child age, number of children)
- Complications during pregnancy (if applicable)
- Family members (number and relationship)

2. Question guideline for pregnant women

- Tell me about your pregnancy
- When did you know your HIV status?
- How did you know your HIV status?
- How did you feel?
- How did you decide to become pregnant with HIV-positive status?
- How do you feel now?
- Who was involved in your decision?
- How did they help you in your decision?
- How have others in your family reacted to HIV status and pregnancy?
- What are your information sources on HIV?

- How did you deal with ...(struggles)..related to become pregnant with HIV-positive status?


- How do you feel now?

- How do you plan for baby/ future?

.....

Appendix E: Ethical approval letters

5) Ethical approval letter from University of Hull


UNIVERSITY OF Hull

PRIVATE AND CONFIDENTIAL

Jaruwan Kownaklai
Faculty of Health & Social Care

Faculty of Health and Social Care
Research Ethics Committee

T: 01482 464030
E: T.Alexander@hull.ac.uk

REF 210

07 March 2016

Dear Jaruwan


RE: HIV positive Thai women's decision making processes around becoming pregnant: a grounded theory study

Thank you for your emails and revised participation sheets.

Given the information you have provided I am pleased to grant ethical approval for your study.

I wish you every success with your research.

Yours sincerely



Dr Tim Alexander
Deputy Chair, FHSC Research Ethics Committee
cc file

University of Hull
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Hull, HU6 7RX
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01482 346311
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6) Ethical approval letter from Roi-et Hospital and branches (Thai language)



ใบรับรองจริยธรรมการวิจัยของข้อเสนอการวิจัย
เอกสารข้อมูลคำอธิบายสำหรับผู้เข้าร่วมการวิจัยและใบยินยอม

หมายเลขข้อเสนอการวิจัย.....1/ 2559.....

ข้อเสนอการวิจัยนี้และเอกสารประกอบของข้อเสนอการวิจัยตามรายการแสดงด้านล่าง ได้รับการพิจารณาจาก คณะกรรมการจริยธรรมการวิจัย สำนักงานสาธารณสุขจังหวัดร้อยเอ็ดแล้ว คณะกรรมการฯ มีความเห็นว่าข้อเสนอการวิจัย ที่จะดำเนินการมีความสอดคล้องกับหลักจริยธรรมสากล ตลอดจนกฎหมาย ข้อบังคับและข้อกำหนดภายในประเทศ จึง เห็นสมควรให้ดำเนินการวิจัยตามข้อเสนอการวิจัยนี้ได้

ชื่อข้อเสนอการวิจัย :- กระบวนการตัดสินใจตั้งครรภ์ในสตรีที่ติดเชื้อ HIV: การศึกษาโดยใช้ grounded theory (ชื่อภาษาอังกฤษ) HIV positive Thai women's decision making processes around becoming pregnant: a grounded theory study

รหัสข้อเสนอการวิจัย (ถ้ามี) :-
สถานที่ที่สังกัด :- คณะพยาบาลศาสตร์ มหาวิทยาลัยมหาสารคาม
ผู้วิจัยหลัก :- ผู้ช่วยศาสตราจารย์จรรวณ ก้าวหน้าไกล

เอกสารที่พิจารณาทบทวน

1. ข้อเสนอการวิจัย	ฉบับที่.....วันเดือนปี.....27 เมษายน 2559
2. เอกสารข้อมูลคำอธิบายสำหรับอาสาสมัครผู้เข้าร่วมการวิจัย	ฉบับที่.....วันเดือนปี...27 เมษายน 2559
3. แบบบันทึกข้อมูล	ฉบับที่.....วันเดือนปี.....
4. งบประมาณการวิจัย	ฉบับที่.....วันเดือนปี.....
5. ประวัติและผลงานผู้วิจัย	ฉบับที่.....วันเดือนปี.....
6. อื่น ๆ (ถ้ามี) ใบรับรองจริยธรรมจากมหาวิทยาลัย Hull ประเทศอังกฤษ	ฉบับที่.....วันเดือนปี.....7 มีนาคม 2559

ลงนาม.....
 (นายวัชร เยี่ยมรัมย์กุล)
 ประธานคณะกรรมการพิจารณาจริยธรรมการวิจัย
 วัน/เดือนปี.... เมษายน 2559

หมายเลขใบรับรอง :- 1/ 2559
วันที่ให้การรับรอง :- เมษายน 2559
วันหมดอายุใบรับรอง :- เมษายน 2560

คณะกรรมการจริยธรรมการวิจัย
 สำนักงานสาธารณสุขจังหวัดร้อยเอ็ด

Appendix F: Transcript is translated from Thai to English (An example)

Tu= Tukta (women) JK= Jaruwan Kownaklai, the researcher

Age of participant: 21 years

Marital Status: Marriage

Religion: Buddhist

Occupation: Housewife

Education level: High School (Grade 9)

G2 P1 A0 L1, last child 4 years Baby Gender: Male

Person	Thai	Dialogue (Translate from Thai to English)
JK.	ขอถามข้อมูลทั่วไปก่อนนะคะ ตอนนี้อายุเท่าไรคะ สถานภาพสมรส อาชีพ และการศึกษาค่ะ	May I have your general personal data such as age, marital status, job, and educational level, please?
Woman (Tu)	ได้ค่ะ อายุ 21ปีคะ แต่งงานแล้ว ตอนนี้เป็นแม่บ้านอยู่บ้านเฉยๆ ค่ะ จบชั้น ม.3 กศน.	Yes, I'm 21 years old. I'm married, but not registered. I'm a housewife without doing any job. My education was grade 9 from Non- Formal Education.
JK.	ก่อนตั้งครรภ์ทำงานอะไรคะ	What job did you do before your pregnancy?

Woman (Tu)	ทำงานเป็นแม่บ้านที่พัทยาค่ะ	I was a house keeper in Pattaya.
JK.	นับถือศาสนาอะไรคะ	What's your religion?
Woman (Tu)	ศาสนาพุทธค่ะ	I'm a Buddhist.
JK.	ท้องนี้ท้องที่เท่าไรคะ	Is it your first, second, or third pregnancy?
Woman (Tu)	ท้องที่สองค่ะ	It's my second one.
JK.	เล่าให้ฟังเกี่ยวกับท้องแรกหน่อยซิคะ	Can you tell me about your first pregnancy?
Woman (Tu)	ลูกคนแรกมีกับสามีเก่าที่ติดเชื้อด้วยกัน เป็นผู้ชาย ตอนนี้อายุสี่ปี ลูกไม่ได้ติดเชื้อ	I had the first baby with the first infectious husband. I got a son, and now he is 4 years old. But my son is not infectious.
JK.	พอจะเล่าประวัติความเป็นมาตั้งแต่ท้องแรกถึงท้องนี้หน่อยได้มั๊ยคะ ว่าเป็นมาอย่างไร	Can you tell the story from the first pregnancy till the present one, and how can it happen?
Woman (Tu)	ได้ค่ะ หนูท้องตอนอายุประมาณสิบหกสิบเจ็ดปี ตอนนั้นไปทำงานที่ต่างจังหวัด รู้จักกับสามีคนแรกก็มีลูกด้วยกัน ก็รู้ว่าติดเชื้อตอนมีลูกคนแรก พอคลอดลูกได้ระยะหนึ่งก็เลิกกับสามีคนแรก เพราะว่าเขาไปมีคนอื่นใหม่ จากนั้นก็มีคนมาสนใจเรื่อยๆ ก่อนมาอยู่กับคนนี้ ก็มีสามีมาแล้วสามคน	Yes, I can. I was pregnant when I was 16-17 years old. I worked in the province, knew my first husband, and had the first child together. In addition, I knew that I was infectious when I had the first child. After giving birth for a while, I broke up with him because he had another wife. However there were many men paying attention to me. Before I have been living with a current

	คนนี้เป็นคนที่สี่ที่หนูอยู่กับตัว	husband, I got 3 husbands and my current one is the fourth.
JK.	น้องบอกว่า รู้ว่าติดเชื้อตั้งแต่ท้องแรก เล่าเหตุการณ์ให้ฟังหน่อยได้มั๊ยคะ ว่าเกิดอะไรขึ้น	Can you tell me what happened because you said that you knew your HIV+ since the first pregnancy?
Woman (Tu)	ก็รู้ตอนตั้งท้องคนแรกเมื่อสี่ปีที่แล้ว ตอนไปตรวจท้องคอนั้นอายุครรภ์ได้สองเดือน หมอก็บอกว่าคุณติดเชื้อนี้ แฟนก็ติดเชื้อนี้ กินยามาเรื่อยๆ จนคลอดลูกคนแรก พอลูกออกมาหมอก็ให้ลูกตรวจเลือดผลยืนยันว่าลูกไม่ติด พอได้เลิกกับแฟนก็กลับมาบ้าน	I knew it 4 years ago. When I checked my first pregnancy , and I was pregnant for 2 months .A doctor said that I and my husband were infectious ;however, I continuously took a medicine. After giving the first baby, a doctor checked my baby and said that he was not infectious. Then I broke up with my husband and came home.
JK.	เล่าความสัมพันธ์กับสามีคนปัจจุบันให้ฟังหน่อยได้มั๊ยคะ	Could you tell me about the relationship between you and a current husband, please?
Woman (Tu)	ก็พอหนูกลับมาอยู่ที่บ้านเกิดก็ได้เจอเขา ไม่ถึงปีมานี้คะ เขารู้จักกันกับพ่อหนู เขาก็มาเล่นด้วยกับพ่อ ก็เลขเจอหนู แล้วเขาก็มาเรื่อยๆ เป็นคนแถวบ้านนั่นแหละ พ่อแม่ก็ชอบเขา หนูก็ชอบเขา แม่ก็เลขให้เอากัน ก็เลขตกลงอยู่กินกัน ไม่ถึงปี ก็มีท้องด้วยกันคะ	After I had come home, I met him. It is nearly a year. My current husband had known my father and always visited him. That was the reason why we knew each other. My parents liked him, and so did I. And they agreed that we should live together, so we decided to live together. I was pregnant when we lived together for nearly a year.
JK.	ท้องนี้ท้องที่สองกับสามีคนใหม่คือคนปัจจุบัน มาตรวจวันนี้ อายุครรภ์ได้เท่าไรแล้วคะ ผลการตรวจครรภ์ สุขภาพแม่และเด็กเป็นอย่างไรบ้าง มีภาวะแทรกซ้อนอะไรมั๊ยคะ	This pregnancy is the second one with a current husband, well! How long have you been pregnant, how is mother and child's health, and are there any complications?

Woman (Tu)	อายุครรภ์ได้ห้าเดือนแล้วค่ะ ไม่มีภาวะแทรกซ้อนอะไร หมอบอกว่าสุขภาพเด็กก็ดี แม่ก็ดีค่ะ	My pregnancy is 5 months, and there are no complications. A doctor reports that mother and child's health is very good.
JK.	ตอนทราบว่าตั้งท้องนี้รู้สึกอย่างไรคะ	How did you feel when you knew you were pregnant?
Woman (Tu)	คือรู้ว่าท้องก็สะท้อนใจมากค่ะ ตอนนี้รู้ว่าท้อง ตอนแรกก็อยากเอาเด็กออก	When I knew, I felt emotional. At first I wanted to do an abortion.
JK.	ทำไมถึงอยากเอาเด็กออกคะ	Why? Could you explain the reason?
Woman (Tu)	เพราะว่าหนูยังไม่พร้อมค่ะ มันไม่ได้ตั้งใจจะมีค่ะ ตอนนั้นประจำเดือนหนุขาด หนุก็รอว่าเมื่อไหร่ประจำเดือนจะมา มันก็ไม่มา ก็เลยไปซื้อแถบตรวจท้องมาตรวจ มันขึ้นสองขีด พอแฟนรู้ว่าท้องก็พาหนุไปตรวจที่ รพ.	Because I was not ready, and I didn't do it on purpose. At that time, my menstruation didn't show, and I waited for it. I decided to buy a pregnancy test strip, and it showed 2 lines. So my husband took me to the hospital to check it.
JK.	ที่บอกว่ายังไม่พร้อม ไม่พร้อมเรื่องอะไร พอจะบอกได้มั๊ยคะ	You said, "I was not ready." What did you mean by this? Could you explain more?
Woman (Tu)	ได้ค่ะ คือหนุไม่อยากจะท้องตอนนี้ อยากจะมีลูกกับแฟนซักคนนะคะในวันนึงในอนาคต หลังจากที่ได้ปรึกษาหมอก่อน แต่ยังไม่ทันได้คุยปรึกษากับหมอเลย หนุก็ท้องก่อน	Yes, I meant that I didn't want to become pregnant at that time, I wished to have a child with him in one day after I had consulted the doctor about my planning, but haven't asked them yet, I become pregnant.
JK.	ที่บอกว่ายังไม่พร้อม ก่อนท้องได้คุมกำเนิดมั๊ยคะ ใช้วิธีการไหน	How did you do for birth control, or did you have any method to do?
Woman (Tu)	หนุไม่ได้ใช้อะไร เคยกินยาคุมมาก่อนแต่ก็อาเจียน เหมือนมันแพ้ยาคุม พอฉีดยาคุมก็อ้วนหนุก็เลยเลิกฉีด พอสามีอะไรกับสามีก็ให้เขาใส่ถุงยาง แต่เขาก็ใส่บ้างไม่ใส่บ้าง	I didn't use or take anything .I used to take birth control pills before, but I experienced a vomiting problem like being allergic to birth control pills .After contraceptive injection, I became fat, so I stopped doing it. My husband wore

	เพราะว่าเขาไม่รู้ว่าหนูคิดเชื้ตอนมาอยู่ด้วยกัน หนูไม่ได้บอกเขา	a condom, but sometimes he didn't do because he didn't know that I was infectious when we firstly lived together.
JK.	ตอนที่หนูมีสามีใหม่ และเขาไม่รู้ว่าหนูคิดเชื้ หนูได้วางแผนการมีลูกร่วมกันอย่างไรคะ กับสามีคนนี้ ก่อนที่จะท้อง	Because you have a new husband and he doesn't know you are infectious, how do you plan to have a child with him before becoming pregnancy?
Woman (Tu)	ก็เคยคุยกันอยู่ เขาก็อยากได้ลูกเพราะเขาก็อายุมากแล้ว ซี่สิบแปดปีแล้ว แต่ก่อนที่จ้ะรู้ว่าหนูคิดเชื้ นะ แต่ถ้าเขารู้ก่อนว่าหนูมีเชื้ เขาก็อาจจะไม่อยากเอาก็ได้ และหนูก็ไม่คิดว่าจ้ะท้องเร็ว พอท้องไปตรวจ หมอก็บอกจ้ะว่าไม่ต้องเอาออกก็ได้ ก็กินยาต่อเด็กก็มีโอกาสค้ดน้อย	Before I become pregnant and he knew my HIV+, we talked to each other, and he wanted to have a child because he was old, 28 years old. However, in my opinion, I thought that If he had known my HIV+ before, maybe he wouldn't have a child with me. Moreover, I didn't think to be pregnant sooner, but when I was pregnant and I checked. A doctor advised me to keep a baby and the medicines can help me and a child, they should be taken continuously and a baby was less likely to be infectious.
JK.	ตอนรู้ว่าท้องนี้ อายุครรภ์จ้ะเท่าไรคะ	When you knew, how many months were you pregnant?
Woman (Tu)	สองเดือนจ้ะ	It was 2 months.
JK.	รู้สึกอย่างไรคะ เมื่อรู้ว่าตนเองท้องอีกจ้ะครั้ง	How did you feel when you knew you were pregnant again?
Woman (Tu)	ร้องไห้จ้ะ	I cried.
JK.	เพราะอะไรถึงร้องไห้	Why did you cry?
Woman	ก็ค้ดว่าไม่น่าจ้ะเป็นอย่างนี้ เขาก็มาจ้ะรู้จ้ะนได้ อีกทั้งก้แล้วลูกค้ดเชื้ด้วย และสามีก็ไมจ้ะเป็น	It shouldn't be like this. He knew it later, and I never told him. I was afraid

(Tu)	วันที่มาฝากท้อง เจ้าหน้าที่ที่นี่ก็เจาะเลือดหนูไปตรวจ เสร็จแล้วเขาก็บอกให้สามีไปตรวจ หนูก็นึกแล้วว่า เขาคงต้องรู้แน่ๆ ว่าหนูเป็น เพราะก่อนหน้านี้ไม่เคยบอกเขา เขาไม่รู้มาก่อน พอสามีไปตรวจ หมอก็เรียกไปแจ้งผลทั้งสองคน แฟนก็อยู่ข้างๆ กัน หมอบอกว่า ภรรยาติดเชื้อเอชไอวี สามีไม่มีเชื้อ	that my baby would be infectious. At the hospital (ANC), a nursing officer took our blood for HIV tested when I came to the hospital to do antenatal care with my husband. I certainly thought that he would know. After that, a doctor told us to know the blood test at a time. The results were that I was infectious, but he wasn't.
JK.	ตอนนั้นรู้สึกอย่างไร	How did you feel at that moment?
Woman (Tu)	เสียใจและกลัวค่ะ กลัวตอนก่อนเขารู้นะ หนูเครียดมากจนอยากฆ่าตัวตาย กลัวเขาจับไม่ได้ กลัวเขาเกลียดหนูทั้งหนู หนูแคร์ความรู้สึกของแฟน นึกไม่ออกเลยว่าถ้าเขารู้ว่าหนูติดเชื้อเขาจะคิดยังไง แต่ใจหนึ่งก็โล่งใจที่เขาไม่คิดเชื้อจากรา	I'm really very upset and fearful, before telling him I was distress, I had a suicide thought, I wished I want to kill myself because I feared he would hate me and leave me alone. I cared about my husband's feeling, I imagined that I had no idea about his reactions to this news, but I was glad that husband wasn't infectious with me.
JK.	รู้สึกอย่างไรอีกมั๊ยคะ	How did you feel more?
Woman (Tu)	ตอนนั้นคิดเลยว่า ถ้าแฟนรับหนูกับลูกไม่ได้ หนูก็จะไปทำแท้ง	At that time, I had thought that if my husband didn't accept me and a baby, I would do illegal an abortion
JK.	แล้วพอสามีรู้ผลเลือดบวกของหนู เกิดอะไรขึ้นคะ เล่าให้ฟังหน่อยซิคะ ตอนที่สามีรู้ว่าท้องตอนแรก เขารู้สึกอย่างไรและเกิดอะไรขึ้นเมื่อสามีรู้ว่าตัวเองติดเชื้อ	What happened when your husband discovered your HIV positive? Could you tell me about his reaction with this news when your husband knew you were pregnant and infectious?
Woman (Tu)	ตอนที่เขายังไม่รู้ว่ามีเชื้อ พอเขารู้ว่าหนูท้อง สามีดีใจ แต่พอเขารู้ว่าหนูติดเชื้อ	My husband was glad when he knew I was pregnant. But when he knew that I was infectious, he was stunned and cried, especially in the day when I knew

	เขาก็อึ้ง...จนร้องไห้เลย เขาร้องให้วันที่รู้ผลเลือดหนู	my blood test result.
JK.	พอจะรู้มัยว่าทำไมเขาถึงร้องไห้	Did you know that why he was stunned and cried?
Woman (Tu)	เขาเสียใจที่หนูไม่บอกเขาก่อน เขามองว่าเขาสงสารหนูและลูก และคิดว่าตัวเองก็คงจะติดด้วย	He was disappointed because I never told him, he told me that he sympathised me and a baby and he thought he might be infected also.
JK.	ทำไมถึงไม่บอกแฟนตั้งแต่แรก นานมัยกว่าจะบอกเขา	Why didn't you tell him, and how long had you decided to tell him?
Woman (Tu)	อยากจะบอกอยู่แต่กลัว กลัวเขาจะรังเกียจ ไม่รู้จะเริ่มยังไง อยู่ด้วยกันนานสามสี่เดือนพอท้อง เขาก็รู้เพราะพยาบาลเป็นคนบอก ใจอยากจะบอกเขาแต่ไม่รู้จะเริ่มยังไง ด้วยคำพูดไหน	I wanted to tell him, but I was afraid that he would mind. I didn't know how to start while we had spent life together for 3-4 months, and later a nurse let him know. I intended to tell him but didn't know how to start, ..which word?
JK.	จากนั้นเกิดอะไรขึ้นกับตัวเองและสามี ในความสัมพันธ์และการตัดสินใจเรื่องลูก	What will happen to you and your husband on a relationship and a decision about your pregnancy?
Woman (Tu)	พอลืมมัยบ้าน เขาก็โทษหนูอยู่ เขาลถามหนูว่าทำไมไม่บอกเขาก่อน หนูก็บอกว่าไม่คิดว่าจะมีลูก จากนั้นเขาก็ปลอบใจหนูว่าไม่เป็นไร มันเกิดขึ้นแล้ว มันก็แก้ไม่ได้ อะไรจะเป็นก็ให้มันเป็น	When coming back home, he blamed me and asked the reason why I didn't tell him. I replied to him that I didn't want to have a baby. Then he comforted me that it happened and could not be solved and let it be.
JK.	หมายความว่าอย่างไร	What does this mean?
Woman (Tu)	หมายความว่า มันเกิดขึ้นแล้ว คือลูกมาอยู่แล้ว ตอนนั้นหนูมีลูกถ้าลูกเป็นต้องยอมรับ รวมถึงผลเลือดเขาด้วย เขาเป็นก็ปล่อยให้มันเป็น คงแก้ไขอะไรไม่ได้	It already happened .We had a baby, and he had to be accepted. "Don't worry about the blood test result, I would infect, if I'm infected, let it be," said he.
JK.	แต่บอกว่าผลเลือดสามีไม่ติดนี่ละ แล้วทำไมถึงคิดว่าเขาจะเป็น	According the doctor, she or he informed you and your husband that he didn't get HIV+. Why did you say that he thought he would be infectious despite his

		blood test result without HIV +?
Woman (Tu)	เขาบอกว่า แม้ตอนนี้ตรวจไม่เจอ วันหน้าก็เจอเหมือนเดิม เขาว่าวันหนึ่งก็ต้องตรวจเจอ	He said that his HIV+ might be found in the future even if it wasn't found that day.
JK.	ทำไมถึงคิดอย่างนั้นคะ แฟนตรวจเลือดไปกี่ครั้งแล้ว แล้วตั้งแต่ตรวจเลือด มีเพศสัมพันธ์กันได้ใส่ถุงมัยคะ	Why do you think so? How any times does your husband take his blood tested? Do you both put on a condom while having sexual intercourse?
Woman (Tu)	ตรวจครั้งเดียวคะ เขาบอกว่ามันอาจจะยังไม่เจอก็ได้ เชื่อกันอาจจะหลบอยู่ เวลาทำอะไรกันก็ไม่ได้ใส่ทุกครั้งคะ	He had his blood tested, just once. He thought that it might hide or could not be found. When we had sexual intercourse, we didn't use a condom every time.
JK.	เพราะอะไรถึงไม่ใส่ถุงยาง ทั้งๆ ที่รู้ผลเลือดทั้งสองคน	Why don't you both use or wear a condom even if you all know a blood test result?
Woman (Tu)	ไม่รู้เหมือนกัน เขาไม่ใส่	I don't know, but he didn't put it on.
JK.	เคยถามเขามั้ยว่าทำไมถึงไม่ใส่	Have you ever asked him about his reason?
Woman (Tu)	ไม่ถามคะ	No, I haven't.
JK.	เพราะอะไรถึงไม่ถามคะ ไม่กลัวเขาติดเชื้อคะ	Why don't you ask him? Are you afraid that he'll be infectious?
Woman	กลัวคะ ไม่อยากให้เขาติดเชื้อ แต่เขาไม่ใส่เอง	Yes, I'm. I don't want him to be infectious, but he refuses himself.

(Tu)		
JK.	ตัวเองก็ไม่ได้ทำอะไรหรอกนะ เช่น ปฏิเสธหรือหาถุงยางมาให้ หรือขอร้องเขา ให้เหตุผลเขา ว่าทำไมต้องใส่ อะไรทำนองนี้ล่ะ	Do you act anything, such as denial, finding a condom provided, asking, or reasoning him why he had to put it on? Whatever!
Woman (Tu)	ไม่ล่ะ ไม่ได้ทำอะไร ก็ปล่อยให้เขามีอะไรด้วย	No, I don't .I do nothing, but let him do what he wants.
JK.	โอเค เข้าใจแล้ว	Okay. I see.
JK.	พอรู้ว่าท้อง หนูบอกว่าจะคิดจะไปเอาเด็กออก ตอนนั้นคิดเฉยๆ หรือไปทำด้วยคะ	You said that you had a thought to do an abortion when you knew you were pregnant, could you tell me that this thought just a thinking or you tried to do an abortion?
Woman (Tu)	ลองทำด้วย ไปซื้อยาขับเลือดมากินตามร้านค้า เป็นเหล้าคองชา	Not only a thought but also I tried, I bought a blood –driving medicine (herbal liquor) from a grocery to drink.
JK.	รู้ได้อย่างไร ว่าต้องซื้ออะไรมากิน กินแล้วได้ผลอย่างไรคะ	How did you know that you should take any medicine to drive the foetus out from your womb, and how did it effect on you?
Woman (Tu)	ก็คนรู้จักในหมู่บ้านบอกมา ว่ายาตัวนี้เป็นยาขับเลือด กินแล้วจะออก	An acquaintance told me that a blood – driving medicine could drive off the blood and a very little baby.
JK.	แสดงว่าเขารู้หรือคะ ว่าเราต้องการเอาเด็กออก บอกเขาว่าอย่างไร ชาวบ้าน	It meant that the local knew you wanted to do an abortion. What were their ideas?
Woman	ค่ะ เขารู้ หนูบอกว่าหนูยังไม่พร้อมมีลูก แต่หนูไม่ได้บอกว่าจะคิดเช่นนั้นคะ	They knew, but I didn't tell them that I was infectious. They always asked me

(Tu)	เขาก็ถามอยู่ว่าทำไมถึงจะเอาออก หนูก็บอกว่าไม่พร้อม อยากเอาเด็กออก เขาก็แนะนำให้ไปซื้อลอมมากินดู	why I wanted to do an abortion. I told them that I was not ready and I wanted to do an abortion. So they suggested me to buy a blood - driving medicine to take.
JK.	กินแล้วเป็นอย่างไร	What was happen after taking?
Woman (Tu)	กินแล้วมันก็ปวดท้องบิบบๆ แต่ไม่มีอะไรออกมา	After taking, I had a uterus ache, but nothing out from my womb.
JK.	แล้วทำอะไรต่อคะ ได้ใช้วิธีอื่นอีกมั๊ย	What did you do then or other methods did you do or have?
Woman (Tu)	ไม่ค่ะ ก็เลยคุยกับสามี ปรึกษากันว่าจะทำอะไรต่อ เขาก็บอกว่า สงสัยเขาอยากมาเกิดกับเรา ไม่เป็นไร มีแล้วก็ปล่อยให้ไป	No, I didn't try other method, I tried to drink this liquid up to a half of bottle, it wasn't success. After that, I decide to discuss with my husband about what to do next. He said, <i>"A baby wants to be born with us, it doesn't matter, and let it be?"</i>
JK.	ตอนที่กินยาทำให้ลูกแท้ง สามีรู้มั๊ยคะว่าหนูคิดทำแท้ง	While you were taking a blood - driving medicine, did your husband know that you wanted to do an abortion?
Woman (Tu)	ไม่รู้ค่ะ ทำไม่ออกแล้วค่อยมาบอกเขา	No, he didn't. After failure, I had just told him.
JK.	เขาว่าอย่างไร	How did he say?
Woman (Tu)	เขาว่า "ไม่เป็นไร ปล่อยให้ลูกออกมา เขาคิดที่ที่รับได้เหมือนเดิม ถ้ามันจะเกิดมันก็เกิด มันเอาคืนไม่ได้แล้ว" เขาบอกว่า เขาก็ไม่รังเกียจหนู รับได้	He said, <i>"It shouldn't have any problem, let him be born, it's acceptable, what will happen is irrevocable, and I don't mind."</i>

JK.	แล้วตัดสินใจอย่างไรเกี่ยวกับการตั้งครรภ์	How did you decide on your pregnancy then?
Woman (Tu)	ก็เอาไว้ค่ะ	I kept my baby.
JK.	การตัดสินใจเอาลูกไว้เป็นความคิดของหนูคนเดียวหรือปรึกษาสามีด้วย	Was keeping a baby your idea or husband?
Woman (Tu)	ก็ทั้งสองคนค่ะ พอหนูบอกเขาว่ากินยาขับเด็กออกนะ แต่ไม่ออก เขาก็บอกว่าให้หยุดกินยา หนูกินยายังไม่หมดขวดเลยล่ะ พอได้ยินเขาพูดอย่างนั้นก็หยุดกินยา แล้วท้องต่อ	It was ours. I told him that I had taken a blood – driving medicine but it failed. So he told me to stop taking a medicine. After he had told me to stop, I did it and kept on my pregnancy.
JK.	ได้เปิดเผยการคิดเชื่อกับใครอีกมั๊ยคะ นอกจากสามี	Did anybody know your pregnancy except your husband?
Woman (Tu)	บอกสมาชิกทุกคนในบ้านค่ะ	I told all my family members.
JK.	ที่บ้านอยู่ด้วยกันกี่คน	How many family members have been living altogether?
Woman (Tu)	เจ็ดแปดคนค่ะ มีพ่อแม่หนู ตา น้องสาวสองคนอายุสิบสี่กับสิบปี หนู ลูกหนู แล้วก็แฟนค่ะ	Seven to eight persons: my parents, granddad, two younger sisters, my child, my husband, and I.
JK.	ความสัมพันธ์กับคนในครอบครัวเป็นอย่างไรบ้างคะ	How's your relationship with your family members?
Woman (Tu)	ดีค่ะ สนุกกันทุกคน	It's pretty good. We're all familiar to each other.

JK.	เริ่มบอกใครเป็นคนแรกก่อนคะ เล่าเหตุการณ์วันนั้นให้ฟังหน่อยได้มั๊ยคะ	Who was the first person that you told your HIV status?
Woman (Tu)	บอกแม่ค่ะ พอรู้ผลเลือดตั้งแต่ท้องแรก ก็ร้องไห้ทำอะไรไม่ถูก ก็โทรมาบอกแม่วันนั้นเลยที่รู้แต่ก็ปลอบใจว่าไม่เป็นไร เป็นแล้วก็เอาสินไม่ได้	It was my mom because I phoned her since I knew a blood test result .I cried helplessly, and my mom comforted me. She said, “It is irrevocable, and it doesn’t matter.”
JK.	แล้วนานมั๊ยคะ หลังจากบอกแม่ ถึงตัดสินใจบอกคนอื่นในครอบครัวต่อ	How long did you decide yourself to tell anybody after telling your mom?
Woman (Tu)	ก็ประมาณอาทิตย์สองอาทิตย์ ค่ะ กลับมาบ้านก็บอกพร้อมกัน	It was about 1-2 weeks. After coming back home, I told them at a time.
JK.	ทำไมถึงตัดสินใจบอกทุกคน ไม่บอกเป็นบางคน	Why did you decide to tell everybody, not anybody?
Woman (Tu)	ก็ไม่รู้จะปิดทำไม ครอบครัวเรา หนูก็ไว้ใจทุกคน อย่างน้องๆ พอรู้แล้วเขาก็ช่วยเตือนหนูให้กินยา จัดยาให้กิน	I didn’t know the reason why I had to keep a secret .I trusted all my family members. All my younger brothers (sisters) always reminded me to take a medicine.
JK.	แต่ละคนมีปฏิกิริยาอย่างไร เมื่อเรบอก	How did they react when you told them?
Woman (Tu)	เขาก็สงสารเห็นใจหนู เขาก็พากันร้องไห้ เสียใจ ที่หนูเป็น	They had a pity and understanding on me. They cried and regretted with what I was.
JK.	น้องๆ ละ เขารู้เรื่องหรือยังเกี่ยวกับโรคนี้	Do your younger brothers or sisters know what a HIV disease is?
Woman (Tu)	รู้ค่ะ	Yes, they do.

JK.	รู้อะไร	What do they know?
Woman (Tu)	อย่างน้องคนที่สิบสี่ปีที่เขาถึงรู้เรื่องว่าโรคนี้เป็นอย่างไร แต่คนอายุสิบปียังไม่ค่อยรู้เรื่องเท่าไร	My 14 – year - old sister knows that what this disease is, but my 10 – year - old sister doesn’t know what it is.
JK.	แล้วคิดว่าคนในครอบครัวเราจะรักษาความลับได้มั้ย	Do you think that your family members can keep your secret?
Woman (Tu)	ได้ค่ะ เพราะหนูบอกว่า รู้แล้วอย่าไปบอกใครเด็ด เดี่ยวคนอื่นจะรังเกียจหนู ชาวบ้านเขาจะรับไม่ได้ เพราะโรคนี้เป็นโรคน่ารังเกียจในสายตาชาวบ้าน	Yes, I do .I told them not to tell anybody because others would despise me.
JK.	น่ารังเกียจแบบไหน	How are they disgusted with you?
Woman (Tu)	ไปไหนมาไหนคนก็ไม่อยากคุยด้วย ไม่อยากให้อินข้าวด้วย ไม่อยากคบค้าสมาคมด้วยค่ะ	Nobody wants to talk to me, have meals together, and be associated with.
JK.	คนในครอบครัวสนิทกับใครมากที่สุด มักปรึกษาใครมากที่สุด	Who are the most familiar to you and you asked an advice as much as possible?
Woman (Tu)	แม่ค่ะ	My Mom
JK.	ใครมีส่วนในการตัดสินใจตั้งท้องของหนูมากที่สุด	Who helped you to make a decision on pregnancy?
Woman (Tu)	สามีค่ะ	My husband

JK.	เพราะอะไร	Why?
Woman (Tu)	เพราะว่า เขาเป็นคนสนับสนุนอยากให้มีท้องต่อ เขามบอกว่า ลูกอยากมาเกิดด้วย เขาจะคิดไม่คิดก็ไม่เป็นไร เขาอาจจะไม่คิดก็ได้เพราะหนูกินยาอยู่	My husband supported me to be pregnant, and he told me that a baby wanted to be born with us. He said, "Don't worry if a baby is infectious because you are taking a medicine."
JK.	แล้วหนูคิดว่าลูกจะติดมั้ย ยายจะช่วยได้อย่างไร	Do you think your baby will be infectious?
Woman (Tu)	ไม่รู้เหมือนกัน แต่ยายจะช่วยต้านไวรัส ถ้าเรากินยาสม่ำเสมอไม่ขาดยา ลูกอาจจะไม่ติดก็ได้	I don't know, but a medicine can help resist a virus. If I always and continuously take a medicine, a baby may not be infectious.
JK.	แล้วกินยาสม่ำเสมอมั้ย เคยขาดยามั้ย	Do you always take a medicine or stop taking it sometimes?
Woman (Tu)	เคยค่ะ เคยขาดหลังจากคลอดลูกคนแรก พอลูกไม่คิดก็ขาดยาอยู่ช่วงหนึ่ง ช่วงที่ทำงานอยู่ที่พัทยา ขาดประมาณสามเดือน เพราะว่าไม่รู้จะไปเอายาที่ไหน ไม่ได้กลับบ้าน	Yes, I do. After giving my first child, I worked in Pattaya, it was about three months when I stopped taking a medicine. I didn't know where I could receive a medicine because I didn't go home.
JK.	แล้วท้องนี้เคยขาดยามั้ยคะ	Have you ever stopped taking a medicine while your current pregnancy?
Woman (Tu)	ตั้งแต่รู้ว่าท้องนี้ ก็กินยาทุกวัน วันละสองครั้ง เช้า-เย็น	After knowing this pregnancy, I have been taking a medicine every day, twice a day: in the morning and in the evening.
JK.	ดูแลตัวเองอย่างไรบ้างท้องนี้	How do you take care of yourself?
Woman (Tu)	ก็กินยาสม่ำเสมอ	I always take a medicine.

JK.	จะเอาลูกอีกมั๊ยคะ วางแผนไว้ว่าอย่างไรกับสามี	How do you plan your life with your husband? Do you want another child?
Woman (Tu)	คุยกันว่าท้องนี้แล้ว หนูก็จะทำหมันจ้า ไม่เอาอีกแล้ว	No, I don't. I have already discussed with my husband that I'll do sterilization.
JK.	ทำไมคะ	Why?
Woman (Tu)	แฟนบอกว่า ไม่รู้ว่าจะเอาอีกทำไม ได้แล้วหนึ่งคนก็พอ	My husband recommends me to stop having another child because we have already got it.
JK.	แล้วลูกเราที่คิดมาด้วยอายุสี่ปี เข้ากันได้กับสามีใหม่มั๊ยคะ	Can your 4- year- child go along with your new current husband?
Woman (Tu)	ได้จ้า เขาก็รักเหมือนลูกค่ะ	Yes, my husband loves him like his son.
JK.	อย่างไรที่เขาแสดงออกว่ารักเหมือนลูก	How does he show that he loves your child like his son?
Woman (Tu)	เขาก็ดูแลดี ไม่ว่าจะอะไร หาเลี้ยงครอบครัว เอาเงินให้ ซื่อของให้ สอนเขาด้วย	My husband takes care of him very well. He looks after our family, gives money, and teaches my son.
JK.	ตอนนี้กังวลเรื่องอะไรมากที่สุดคะ	What are the most worried for you right now?
Woman (Tu)	กลัวลูกติดค่ะ	I'm afraid that my baby will be infectious.
JK.	เพราะอะไรคะ เพราะมีประสบการณ์การมีลูกมาแล้วหลังติดเชื้อหนึ่งคนและลูกก็ไม่ติด	Why are you worried? You had a child before, but he wasn't infectious. Why

	ทำไมท้องนี้ถึงคิดว่าลูกจะติดคะ อธิบายให้ฟังได้มั๊ยคะ	do you think this pregnancy will be infectious?
Woman (Tu)	ท้องแรกหนูกินยาตรงเวลา ไม่เคยเลยเวลา ท้องนี้รู้สึกว่ายากินยาเลยเวลาไปบ่อย วันละสองสามนาที เพราะว่าบางทีทำอย่างอื่นอยู่	For the first pregnancy, I took a medicine on time, but this pregnancy I always take a medicine after time specified, 2-3 minutes, because I'm busy.
JK.	นอกจากกินยาไม่ตรงเวลาแล้ว มีเรื่องอื่นอีกมั๊ยคะที่กังวลว่าลูกคนนี้จะติดเชื้อด้วย	What other matters else are you worried except taking a medicine?
Woman (Tu)	เรื่องขาดยาค่ะ คือหยุดขาดมาก่อนท้องที่บอกว่ายากินสามเดือน คือก่อนท้องนี้ไม่ได้กินยามาสามเดือน พอรู้ว่าท้องนี้ค่อยมาเริ่มใหม่คะ ก็เลยกลัวว่าจะช้าไป	Yes, I stopped taking a medicine for 3 months before pregnancy. After I had known, I started taking a medicine again. So I have been worried up to now, and I'm afraid that it'll be late.
JK.	ช้าไปสำหรับอะไรคะ	Why do you say it'll be late?
Woman (Tu)	กินยาช้าไปค่ะ กลัวว่าตอนเราขาดยามันจะติดไปหาลูกก่อน	It is taking a medicine too late, and I'm afraid that HIV+ will be infectious to my baby.
JK.	มีอย่างอื่นอีกมั๊ยคะที่กังวลว่าจะทำให้ลูกติด	Do you have other reasons else able to infectious to your baby?
Woman (Tu)	ไม่มีค่ะ เพราะร่างกายหนูก็แข็งแรงดี	No, I don't. My health is very strong.
JK.	ดูแลตัวเองอย่างไรถึงแข็งแรงดี	How do you take care of yourself to be strong?
Woman (Tu)	ก็กินยาสม่ำเสมอ อย่างอื่นก็ปกติธรรมดา กินอาหารพื้นบ้าน ไม่กินเหล้ากินยา	I always take a medicine, have local foods, but don't drink alcohol.

JK.	มีอย่างอื่นอีกมั้คะที่กังวล	Do you have anything else to worry?
Woman (Tu)	ก็มีแค่สองเรื่องคะที่กังวล อันแรกก็กังวลมากก็กลัวว่าลูกจะติดเชื้อ แต่ถ้าลูกติดจริงๆ หนูก็จะยังรักและดูแลเขา อันที่สองก็กลัวว่าแฟนจะทิ้งไปเพราะเขาไม่ติดเชื้อ เขาอาจไปเจอผู้หญิงอื่น และถ้าเขาทิ้งหนูไปจริงๆ หนูก็ต้องเข้มแข็ง อยู่ให้ได้ ต้องเดินหน้าต่อไป แค่อุ้มให้ได้ คิดไปว่าจะอะไรจะเกิดก็ให้มันเกิด	Just two things that I told you. I'm worried about 2 things, firstly, It is the most worried for me that I'M afraid my baby will be infectious. Secondly, relationship with my husband in the future because he isn't infectious. I'm afraid that he'll find another woman without HIV+ disease. However, if my baby would be infected, I will love and care my children always. If he leaves me, I will be strong and try to keep my life going on. Just live and let it be, what will be will be.
JK.	อาจารย์ชื่นชมในความเข้มแข็งของหนูมากนะคะ มีอย่างอื่นอีกมั้คะที่กังวล	I'm really appreciated to your strong. Do you have anything else to worry?
Woman (Tu)	แค่นี้คะ	That's all
JK.	จะขอถามเกี่ยวกับแหล่งความรู้ของโรคที่ได้ให้หน่อยนะคะ ได้รับความรู้เรื่องโรคและการดูแลตัวเองจากที่ไหนบ้าง	May I ask about your HIV knowledge resources? How do you get any knowledge about HIV disease and the way to take care of yourself?
Woman (Tu)	จากพยาบาลที่ รพ.นี้จ้า	Yes, I got them from nurses in this hospital
JK.	ได้ค้นหาจากที่อื่นอีกมั้คะ เช่น อินเทอร์เน็ต แผ่นพับ	Do you find any information from other sources like the internet or leaflets?
Woman (Tu)	ไม่คะ	No, I don't.

JK.	ส่วนใหญ่เรื่องที่ได้รับเป็นเรื่องเกี่ยวกับอะไรคะ	What main information have you gotten?
Woman (Tu)	การกินยาต้านไวรัสค่ะ ส่วนใหญ่จะเป็นเรื่องการกินยาและรักษา	How to take antiviral drugs and follow-up
JK.	คลอดแล้ววางแผนการเลี้ยงลูกไว้อย่างไรบ้างคะ ใครจะช่วยดูแลลูกบ้าง	After giving birth, how do you plan to bring up your baby, and who will help you?
Woman (Tu)	คิดว่าจะให้แม่ช่วยเลี้ยงลูก คลอดเสร็จลูกแข็งแรงประมาณห้าหกเดือนก็จะออกไปทำงานหาเงินช่วยสามี	I think that my mom can help me .After 5-6 months, I'll find a job to do because my baby may be strong enough.
JK.	วางแผนให้ลูกกินนมอะไรคะหลังคลอด	What kinds of milk do you want your baby to drink after giving birth?
Woman (Tu)	ไม่ให้กินนมแม่ค่ะ กินนมผสม	I don't allow my baby to drink my breast milk, but powdered whole milk.
JK.	เพราะอะไรคะถึงไม่ให้ลูกกินนมแม่	Why don't you allow your baby to drink your breast milk?
Woman (Tu)	เพราะว่าลูกจะรับเชื้อด้วยค่ะ	I'm afraid that my baby will be infectious.
JK.	ถ้าคนถามล่ะ จะตอบว่าอย่างไร ถ้าชาวบ้านถามว่าทำไมไม่ให้ลูกกินนม	How do you give an answer if the villagers ask you about the reasons?
Woman (Tu)	ก็ตอบว่า แม่ไม่มีน้ำนมค่ะ เพราะคนแรกก็ไม่ได้กินนมแม่ค่ะ	I'll tell them that my breast milk is not enough, and also my first child didn't drink mine.

JK.	กลัวคนที่รู้จักเรารู้มีจะ ว่าเราเป็นโรคนี	Are you afraid that everybody will know that you are infectious to HIV+?
Woman (Tu)	กลัวค่ะ	Yes, I'm.
JK.	กลัวแล้วทำไมกลับมาอยู่บ้านเพราะพี่เคยเห็นคนไข้หลายคนที่เป็นโรคนีหลายคนไม่ยอมกลับมาอยู่บ้านหรืออยู่ในสังคมที่มีคนรู้จักมาก เพราะกลัวความลับถูกเปิดเผย ในกรณีของน้อง เมื่อรู้ว่าคิดเชื่อแล้วทำไมถึงกลับมาอยู่บ้านเกิด พอจะให้ความคิดเห็นเรื่องนี้ได้มั๊ยคะ	Why have you been living at home if you are worried? I have seen many AIDS patients not to come back home or their societies, because they are afraid that their secrets will be disclosed. In your case, why do you come back to your hometown after knowing your blood result? Do you have any idea?
Woman (Tu)	หนูกลับมาอยู่บ้านเพราะคิดว่ามันน่าจะดีกว่า ไม่อยากบินไปที่อื่น อย่างน้อยที่บ้านก็มีสิทธิรักษาโรคได้ไม่ต้องขอใบส่งตัว สิทธิก็ได้เลย ไปอยู่ที่อื่น สิทธิไม่ได้ถ้าไม่มีใบส่งตัว มันก็ยุ่งยาก และอีกอย่างหนึ่งคนในครอบครัวเรารู้หมดแล้ว ไม่ต้องปิดบัง ทุกคนยอมรับเรา แต่นั้นหนูก็อยู่ได้แล้ว ส่วนชาวบ้านถ้าไม่บอกเขาก็ไม่รู้ มา รพ. ก็เจอคนรู้จักเหมือนกัน เขาก็ถามว่ามาทำอะไร ก็บอกว่ามาหาหมอ ก็ไม่ถามต่อว่าเป็นอะไร	The reasons are that it should be better, and I don't want to be in other places. At least, at my home town I'm secured about my medical services with free of services under Universal Coverage Scheme. It means that if I have been living in other places, it become busier and not free services charges. Another reason is that all family members have already known my HIV status, and I don't have to keep it a secret .I can live with everybody's acceptance. For the villagers, they have never known if I don't tell them. I was always asked when visiting the hospital. I told them that I just saw a doctor, and they asked nothing.
JK.	คนในครอบครัวให้กำลังใจเราอย่างไรบ้าง มันสำคัญต่อหนูอย่างไร	How do your family members encourage you? How is it important to you?
Woman (Tu)	มันก็สำคัญมาก คนในครอบครัว พ่อแม่ลูก แม่บอกคนอื่นในครอบครัวว่า หนูเป็นแบบนี้อย่าไปดกย้าหนู ให้ช่วยกันดูแลหนู เพราะหนูก็ทุกข์ของหนูอยู่แล้ว	It's very important to me. My parents told all members not to drive in me but take care of me, because I'm considerably distressed.
JK.	ตอนนี้หนูได้กำลังใจจากใครมากที่สุด ในครอบครัว	Who encourages you most right now?

Woman (Tu)	ได้จากแม่สามี และก็ลูกค่ะ	From my Mom, husband , and my baby
JK.	ได้รับอย่างไรคะ จากคนเหล่านี้	How do you get encouragement from them?
Woman (Tu)	แม่ก็ให้คำปรึกษาทุกเรื่อง เรื่องโรค เรื่องชีวิต แฟนหนูด้วยก็ให้กำลังใจดี เขาก็บอกว่าไม่หนีไปไหน อยู่ด้วยกันต่อ อะไรจะเกิดก็ให้มันเกิด และก็อยู่เพื่อลูกเพื่อแม่ ดูแลเขาให้ดีที่สุด อนาคตก็ค่อนข้างกัน แต่ที่ห่วงก็คืออนาคตลูก กลัวลูกจะลำบากไม่ว่าจะคิดหรือไม่คิด กลัวเขาอยู่ยากว่าแม่คิด และถ้าเขาคิดเขาจะอยู่อย่างไร เราก็ห่วงเขา กลัวลูกลำบาก	My mom gives an advice for everything; disease and life. Also my husband told that he never left me alone, would live together, and did not fear what would happen. I live right now because of my baby and parents. I want to take care of them best. However. I'm worried about my children's future. I'm not afraid that my baby will be infectious, but I don't want him to be in trouble.
JK.	ถือว่าหนูโชคดีมากที่ครอบครัวยอมรับและดีกับหนูทุกคน ไม่ใช่คนไหนทุกคนจะได้รับการยอมรับและดูแลอย่างนี้ ที่ที่ชื่นชมและยินดีกับหนูด้วยนะคะ	You are very good luck that your family accepts and takes care of you very well. Not every patient is accepted and treated well. I'd be glad with you
Woman (Tu)	ค่ะ หนูก็ว่าดีที่มีครอบครัวยอมรับหนู	Yes, it's my luck that my family members accept me.
Woman (Tu)	หนูอยากถามอาจารย์ช้อยู่ค่ะว่า ทำไมแฟนหนูถึงไม่คิด ทั้งๆ ที่ไม่ใช่ถุง ต่อไปเขามีโอกาสคิดมั้ยคะ หนูกับเขาก็กังวลว่าจะตรวจเจอทีหลัง	I'd like to ask you why your husband isn't infectious even if he didn't put on a condom. You both are worried about infection. Will he have a chance to be infectious?
JK.	เขาตรวจเลือดมาก็ครั้งแล้วค่ะ ตั้งแต่ทราบว่าเรารักเชื้อ แล้วผลเป็นอย่างไร	How many times he has his blood tested since he knew you were infectious? How was his blood test result?
Woman (Tu)	สองครั้งค่ะ ผลก็ไม่ติดค่ะ หนูคนเดียวที่มีเชื้อ	Twice! Only I was infectious but he wasn't.

JK.	สองครั้งนั้นห่างกันกี่เดือน	How far is it between the first blood test and the second one?
Woman (Tu)	สามเดือนค่ะ ครั้งที่สองก็ไม่ติดค่ะ หนูก็แปลกใจเขาก็แปลกใจว่าทำไมไม่ติด	It was 3 months. Also his blood hadn't shown a negative result at the second time. So I was surprised that he wasn't infectious.
JK.	ก็ดีแล้วค่ะ นับว่าเป็นข่าวดีที่เกิดขึ้นที่เขาไม่ติด เป็นไปว่าได้หนูกินยาตั้งแต่อายุสิบเจ็ดปี ยาต้านไวรัสอาจทำให้ปริมาณไวรัสในเลือดของน้องมีปริมาณน้อยจนไม่สามารถถ่ายทอดไปสู่สามีได้ ทั้งที่มีเพศสัมพันธ์กันโดยไม่ใช้ถุงยางอนามัย ซึ่งการตรวจไม่เจอในครั้งแรกไม่เจอเชื้อ อาจจะอยู่ในช่วงเชื้อหลบอยู่ ก็ต้องนัดมาตรวจยืนยันอีกครั้งห่างกันสามเดือน ซึ่งสามีมาตรวจยืนยันก็ไม่ติด นั่นก็หมายความว่า จนถึงวันที่ตรวจยืนยัน เขาไม่มีไวรัสฮอดส์ในกระแสเลือด เพราะถ้ามีมันก็จะปรากฏหลังจากการรับเชื้อภายในสามเดือน แต่นั่นไม่ได้หมายความว่าในอนาคตเขาจะไม่ติดเสมอไปถ้ายังมีเพศสัมพันธ์กันกับหนูโดยไม่ใส่ถุงยางอนามัย	It's good news that he isn't infectious. May be, because you have taken a medicine when you was 17 years old. Antiviral drugs may decrease a virus in your blood less. You and husband had sexual intercourse without a condom, but he wasn't infectious. Even though a virus (HIV) wasn't found at the first time, it might hide .So a doctor made an appointment to check his blood again between 3 months. However, he was confirmed not to be infectious. He has no a virus (HIV) in his bloodstreams up to the present time because he didn't get it. If he got it, virus (HIV) could appear after getting infection within 3 months. However, it doesn't mean, he is safe in the future if he has sexual intercourse with you without a condom.
JK.	ที่ถึงถามหนูตั้งแต่ตอนแรก ระบุว่าทำไมถึงไม่让他ใส่ถุงยางอนามัย ฟังเหตุผลแล้วคิดว่าต่อไปในอนาคตจะให้เขาใส่มีัยะ	That's why I asked you at first. Why did you allow him not to put on a condom? After listening to the reason, will you let him put on the condom for next time' sexual intercourse?
Woman (Tu)	ก็อยากให้ใส่ค่ะ แต่ไม่รู้เขาจะยอมมีัย (หัวเราะ)	Yes, I will. But I don't know whether he agrees.
JK.	ทำไมถึงจะไม่ยอม	Why doesn't he agree?
Woman	ไม่รู้ค่ะ อาจารย์ลองถามเขาจะคะ	I don't know. Please ask him yourself?

(Tu)		
JK.	ค่ะ พี่จะลองถามเขาดู ตอนคุยกับเขาค่ะ	OK, I'll ask him when I talk to him.
JK.	แล้วกังวลเกี่ยวกับความสัมพันธ์กับแฟนในอนาคตมั๊ยคะ	Are you worried about your relationship with him in the future?
Woman (Tu)	กังวลอยู่ค่ะ เพราะเขาไม่ติด เราติด กลัวเขาอยู่กับเราไม่นาน เพราะว่าถ้าเขาไปมีคนใหม่ที่ไม่ได้เป็นโรคเขาก็อาจจะไม่เป็นโรค ในอนาคต แต่เขาก็บอกว่าจะไม่ทิ้งหนู ไม่ทิ้งลูก เขาก็ห่วงลูกด้วย แต่เราก็ไม่รู้เนอะอะไรก็อาจเกิดขึ้นในความสัมพันธ์เพราะหนูติดเขาไม่ติด	Yes, I have reminded myself because he isn't infectious. I'm afraid that he'll find another woman without HIV+ disease in the future. However, he told me that he never left me and our baby. Nothing is guarantee and everything would happen with our relationship because I'm infected, he isn't.
JK.	ตามที่นัดกันไว้ล่วงหน้า พอคุยกับหนูเสร็จพี่ก็จะคุยกับแฟนหนูต่อ ตามที่หนูอนุญาตไว้	On appointment schedule, I'll interview him after talking to you, according to your permission.
JK.	พี่ขอถามอีกสองคำถามนะคะ ก่อนที่เราจะจบการสัมภาษณ์สำหรับวันนี้ คำถามแรกก็คือ ความรู้สึกต่อการตั้งครรภ์หรือกับลูก มันแตกต่างกันอย่างไรคะ ระหว่างการเป็นโรคนี้อะไรและไม่เป็นโรคนี้อะไร	May I ask you about 2-3 questions before we end our conversation? First, how are you feelings on pregnancy or with your baby between you having a virus and having no it?
Woman (Tu)	มันต่างกันค่ะ ถ้าเราไม่เป็นมันก็ไม่ต้องกังวลเรื่องลูก ถ้าเราเป็น เราก็จะกังวลเรื่องลูก กังวลว่าเขาจะเป็นอย่างไร จะอยู่ยังไรต่อไป ก็จะกังวลเรื่องอนาคตเขาเป็นส่วนใหญ่ค่ะ	It's different. Unless I were infectious, I wouldn't have been worried. Now, I was infected and I'm concerned about my children, especially over their future. How will they be and live?
JK.	คำถามที่สองค่ะ ความรู้สึกต่อการตั้งครรภ์หรือกับลูกมันแตกต่างกันมั๊ยคะ ระหว่างรู้ว่าท้องก่อนแล้วรู้ว่าติดเชื้อในท้องแรก และรู้ว่าติดเชื้อแล้วท้องในท้องที่สอง ถ้าแตกต่างกันอย่างไร พูดย่างๆ ก็คือ	For the second question, what are your feelings on your pregnancy and your baby between knowing pregnancy before infection and knowing infection before pregnancy, especially for the second pregnancy? Easily speaking, do you have different feelings between knowing infection before and after

	ความรู้สึกต่อการตั้งครรภ์มันต่างกันมีระหว่างรู้การติดเชื้อก่อนและหลังตั้งครรภ์	pregnancy?
Woman (Tu)	หนูว่ามันต่างกันที่ว่าเป็นคิดกับไม่คิดมากกว่าค่ะ แต่ถ้าหนูติดเชื้อแล้ว รู้ก่อนหรือหลังท้อง มันก็ไม่ต่างกัน เพราะช่วงเราก็กังวลเรื่องลูกอยู่ดี ค่ะ	I know more that they are different between being infectious and uninfected. But now, I'm infectious, knowing HIV status before or after pregnant is not different for me, why I say like this, because I have had experience with both situations on my two pregnancies. I'm still worrying about my children's health being. Each pregnancy, I have feared my child to be infectious.
JK.	ในฐานะที่หนูเป็นผู้หญิงคนหนึ่งติดเชื้อเอชไอวีและอยู่ในวัยเจริญพันธ์ ถ้าย้อนเวลากลับไปได้ ก่อนท้องนี้ ถ้าเลือกได้ ยังเลือกจะมีลูกหรือท้องอยู่ค่ะ	You are a woman infectious to HIV+ , and you are in a reproductive age. If you could return and choose, would you have chosen to be pregnant?
Woman (Tu)	ก็อยากมีลูกอยู่ค่ะ และตั้งใจจะมาปรึกษาหมอก่อนมีค่ะ เพราะหนูแต่งงานกับสามีใหม่ เขาก็อยากมีลูก หนูก็อยากมีให้เขาสักคน แต่ถ้าสามีไม่อยากมีหนูก็จะไม่มีค่ะ ก็ขึ้นอยู่กับสามีด้วย แต่ฉันมีลูกก่อน ก็เลยไม่ได้ปรึกษาหมอก่อน มาปรึกษาทีหลัง เขาก็แนะนำว่าอย่าเอาออกเลย ถ้ากินยาโอกาสลูกติดก็น้อย	Yes, I would. I intended to come and consult with a doctor before being pregnant because I was married to my new husband. He wanted to have a baby, and so did I. But unless he had wanted, I wouldn't have been pregnant for him. It depended on him. However, I was pregnant sooner expectation, so I didn't consult a doctor first. And later a doctor recommended to me not do an abortion and take a medicine.
JK.	มาถึงตอนนี้รู้สึกอย่างไรกับการตัดสินใจท้องต่อคะ มาได้ห้าเดือนแล้ว	How do you feel with a decision to your 5 month pregnancy?
Woman (Tu)	ก็ยอมรับได้แล้ว อะไรจะเกิดก็ให้มันเกิด แฟนก็อยากให้ท้องต่อด้วย	It's acceptable, let it be, and my husband wants my pregnancy to be continued.
JK.	นานมีกว่าจะยอมรับได้ อะไรที่ทำให้ทำใจยอมรับได้	How long can it be acceptable? What makes it acceptable?
Woman	ก็ตั้งแต่กินยาแล้วเขาไม่ออก พอสามีรู้ก็ห้ามไม่ให้กินอีก ก็เลิกกินเลยขาจับเด็ก พอรู้ว่าแฟนยอมรับ	After I had taken an abortion-inducing drug, but it failed .My husband had known, and he stopped me to take it. After my husband had been acceptable .I

(Tu)	จากนั้นก็ตั้งใจดูแลเขา กินยาสม่ำเสมอ แฟนก็ให้กำลังใจดี	always took a medicine and was encouraged by him.
JK.	โอเคค่ะ คิดว่าได้รับฟังประสบการณ์และได้ใช้เวลามาพอสมควรแล้วนะคะ คำถามที่เตรียมมาก็ได้ถามหมดแล้ว อีกอะไรที่ไม่ได้ถาม แล้วหนูอยากเล่าให้ฟังเพิ่มมีค่ะ	It's OK.I think I have listened to your experiences for a long time, and I asked you all my questions prepared. Do you want to let me know anything apart from my asking questions?
Woman (Tu)	ไม่มีค่ะ นึกไม่ออก	No, I don't .Nothing comes to mind.
JK.	งั้นถ้าไม่มี พี่ขอขอบคุณนะคะสำหรับเวลาที่มาเล่าประสบการณ์ผู้กันฟัง สัมภาษณ์นานอาจจะเหนื่อย ก่อนกลับนั่งพักก่อนก็ได้ค่ะ ทานน้ำ ทานของว่างก่อนค่ะ	If you don't have any question, I would like to thank you very much for your time to talk about your experiences. You might tried from interview, please take a rest and have some refreshments before going back home. Thank you very much.
Woman (Tu)	ค่ะ ยินดีค่ะ ขอขอบคุณอาจารย์เช่นกันค่ะ	OK, you're welcome, thank you too.
	ปิดการสัมภาษณ์	Close the interview

Appendix G: Background and context of women

Case 1 (Panida)

Panida is 22 years old, this is her second pregnancy with her current husband and the couple are living together. Her first child and current pregnancy are both from this husband. Her child was aged 10 months when she conceived this pregnancy. She knew her HIV positive status during her first pregnancy but the first child was HIV negative. She conceived this pregnancy by accident because she missed her contraceptive oral pill and the couple had not been using a male condom. She did not abort the pregnancy because she has fearful of committing a 'sin' and the pregnancy was too advanced (4-5 months) to do an abortion. She had paused her ARV before becoming pregnant because she did not want to be suspected of being HIV positive by her husband, family and neighbours with her frequent visits to the hospital. She had been keeping her HIV positive status secret from her husband and family members so far.

Case 2 (Peungpen)

Peungpen is 25 years old, her current partner is her third; she has 3 children from her different ex-husbands. The first daughter is from the first husband, the second and third daughters are from the second husband and this pregnancy from the current husband with whom she has been living for at least 2 years. She knew her HIV status before becoming pregnant. She and her husband planned to have at least one child in the future but she got pregnant earlier by accident because of missing the oral contraceptive pill and the couple not using a male condom. She

did not have an abortion because her husband wanted a baby. So far, she has concealed her HIV status from her husband, and she did not know his HIV status because he had never been tested. She is living with her husband.

Case 3 (Uraiwan)

Uraiwan is 21 years old, she had many partners previously and did not want to reveal how many this was. She said that she contracted HIV from her ex-partner during her last pregnancy and she then had an illegal abortion. She then decided to split from her ex-partner. This pregnancy is her third but her first with her current husband; her first child is aged 3 years and from an earlier ex-partner, the second pregnancy was terminated. The current husband got to know her HIV status following her attendance at the ANC service. She did not have an abortion with this pregnancy because the pregnancy was too advanced and her fear of the complications associated with abortion. She got pregnant by accident earlier than her planned time (she had wished to get pregnant at 27-28 years old) because of her lack of knowledge of contraception. Presently, she is living with her husband although he knows her HIV status and he is not infected.

Case 4 (Kanchana)

Kanchana is 19 years old and one of the two youngest participants. She contracted HIV from her mother. Her HIV status was confirmed when she was a 14 years old. This is her first pregnancy, she is married to and lives with her husband. He knew her HIV status before she became pregnant. Kanchana and her husband, who was HIV negative, planned to have a child so she stopped taking

her oral contraceptive pills. She felt confident that her husband and baby would not be infected from her because she had been taking ARV constantly for many years.

Case 5 (Aree)

Aree is 36 years old and one of the 2 oldest women in this study. She had been married 2 times previously and she contracted HIV from one of her ex-husbands but she could not identify which one. Aree has a 13-year old son with her ex-husband and her son is HIV negative. She has been living with her current husband for 4 years and this is her second pregnancy, but first with this husband. She concealed her HIV status from her husband and attempted an illegal abortion on 3 occasions during this pregnancy. All her abortion attempts failed. Following ANC attendance, she allowed a nurse to inform her husband of her HIV status. His HIV test revealed he was HIV negative.

Case 6 (Buraya)

Buraya is 19 years old and an orphan. She contracted HIV from her mother. She had her HIV status confirmed when she was aged 7 years. This is her first pregnancy. She is married and lives with her husband. He knew her HIV status before she became pregnant. Buraya and her husband, who has tested and has been confirmed on 2 occasions as being HIV negative, planned to have a child together. She then stopped her oral contraceptive pills. She and her husband wanted at least one child. She was worried that her husband would be infected

because he never wore a condom when having they were having sexual intercourse. However, he remained HIV negative.

Case 7 (Tukta)

Tukta is 21 years old, she had 3 previous partners before her current partner. She revealed that she became HIV positive from an ex-partner. This was revealed at ANC during her last pregnancy but her child was HIV negative. She separated from that ex-husband, returned to her home town, then met and married her current husband, her fourth. She is pregnant with her second baby with her current husband. She lives with him and concealed her HIV status from him until attending ANC services. She then told her husband of her HIV positive status and decided to do an illegal abortion but this failed. The husband was advised by ANC services to be tested but he was HIV negative. She remained living with her husband despite him knowing her HIV status. He remained HIV negative.

Case 8 (Napat)

Napat is 33 years old. She revealed that her background had been as a prostitute and that she had had a drug addiction since being a teenager living in a large city. She had known her HIV status since when she was 19 years old and working as a sex worker. She had 3 previous unwanted pregnancies and had successfully illegally aborted all of her pregnancies before this pregnancy. She decided to accept this baby even though she was HIV positive and in an unstable relationship with a partner. She lived as a single person and the reason she decided to keep this pregnancy was that she felt she had had enough abortions and she wanted to

have one baby because she getting older. She said that people said that she is a beautiful woman and that she was able to attract many men. She was being treated for the complications from her drug addiction in the same hospital as where she received her ANC services. She was living with her aunt in a small town.

Case 9 (Malee)

Malee is 29 years old, she had a 4-year daughter from an ex-husband and he was HIV negative. She contracted HIV positive from her current husband. Both their HIV status was revealed after her husband underwent arm surgery. The doctor treating her husband advised her to have a test for HIV. She became pregnant by accident because of errors with taking her contraceptive pills. However, they decided not to have an abortion but to keep the baby.

Case 10 (Hom)

Hom is 33 years old, she has a 14-year daughter from an ex-husband. Her current pregnancy is the second with an overseas partner who is living abroad with his family. He will visit Hom as a tourist once a year. She had background as a sex worker of 8-9 years duration. She knew her HIV status 8 years ago and she had no idea from whom she had contracted her HIV. Currently, she had stopped sex work and had returned to her home town, living as a single mum.

Case 11 (Navarat)

Navarat is 30 years old, she has a 6-year son from her current husband and this child is HIV negative. She was infected by her current husband. This is her second pregnancy with the same husband. At the time of interview Navarat revealed that her husband had died from complications of AIDS one month previously. Now, widowed, she was living with her son, and mother. She had not revealed her HIV status to anybody.

Case 12 (Muay)

Muay is 22 years old. She revealed that she had been having sex intercourse since she was 14 years with many partners. She had not been concerned about the sexual transmission of diseases and had not requested partners use a male condoms until she was 18 years old. Following a deterioration in her health and with the symptoms of tuberculosis (TB), she was diagnosed as HIV positive with TB. She did not know from whom she had contracted HIV. She had a 1- year son with an ex-husband who was in jail for illegal drug selling. She was re-married to a new husband who was HIV negative. She concealed her HIV positive status from her current husband until attending ANC services. She then told her husband of her status, he was tested and confirmed as being HIV negative. Currently she is living with her husband and his family. The couple have not revealed her HIV status to other family members.

Case 13 (Lew)

Lew is 23 years old, this is her fourth pregnancy with her current husband. She aborted all 3 previous pregnancies but decided to keep her current pregnancy. Lew knew she was HIV positive when she became the pregnant with her third pregnancy. She had planned for this pregnancy because she thought that if she wanted at least one child, and a baby would be less likely to be infected if she took ARV consistently. She was divorced from her husband when she was 5 months pregnant as he was HIV negative. She was living with her brother and mother who have known her HIV status and were supportive of her.

Case 14 (Aonicha)

Aonicha is 36 years old. She had completed a bachelors degree. She had 2 HIV negative children with the same husband. This is the third pregnancy with her husband. She knew her HIV positive status from the time of her first pregnancy but only decided to tell her husband in the second pregnancy. Her husband had never been tested for HIV so, she did know his HIV status. He has decided not to be tested. Her pregnancy was unplanned because of her missing contraceptive pills. Currently she is living with her husband and children. She and husband have kept her HIV status from others.

Case 15 (Sai)

Sai is 24 years old, she contracted HIV from her current partner even though she knew his HIV status before getting it. She had decided to live and have children with her husband despite the fact that she could have left the relationship before becoming infected. Her first son is 2 years of age and confirmed as HIV negative. She planned and consulted the doctors before having this her second child. Sai expects that this baby will not be infected as with her previous child.

Appendix H: Critical appraisal 81 papers in a systematic review

No.	Authors	Objective of study	Samples/ participants	Methodology/ Method	Key Findings	Strengths/ limitations
1	Akelo & Girde et al (2013)	-To analyse Family Planning (FP) attitudes among HIV-infected pregnant women enrolled in a PMTCT clinical trial in Western Kenya.	N=522 -HIV-infected pregnant. -Setting in Western Kenya.	-Quantitative research -Structured questionnaires -Fisher's exact test	-Most participants (87%) used FP, only 8% indicated condoms as a preferred FP method, and 59% of current pregnancies were unintended. -Factors associated with positive intentions to use FP were: marital status (p=0.04), having talked to their spouse or partner about FP (p<0.001), perceived spouse or partner approval of FP (p<0.001), previous use of a FP method (p=0.006), attitude toward the current pregnancy (p=0.02), disclosure of a sexually transmitted infection (STI) diagnosis (p=0.03) and ethnic group (p=0.03).	-The research design is clearly described and the researchers offered additional support & counselling for participants taking part in the study. - Validity was assessed with a pilot study but reliability of the tool is not documented in the paper. -Population is identified but sampling strategy is not indicated.
2	Badell, M.L., Lathrop, E., Haddad, L.B., Goedken, P., Nguyen, M.L. & Cwiak, C.A. 2012	-To determine current contraceptive use, contraceptive desires and knowledge, future fertility desires, and sterilization regret in a cohort of HIV-positive women.	N= 127 - HIV-positive women receiving care at an urban infectious disease clinic. -Setting: USA.	-Quantitative -Cohort study -Multivariate analysis	1. Contraceptive use and desires: the most common forms of contraception used were sterilization (44.4%) and condoms (41.3%), less than 1% used a long-term reversible method of contraception (LARC) despite these being the methods that best fit their desired attributes of a contraceptive method. 2. Desire for Fertility and Discussion with Providers: Overall, 29.4% desired future fertility. Only 50.6% of those sexually active had spoken with a provider within the last year regarding their contraceptive plans.	-Most participants were older women which may have influenced the findings with respect to the high use of sterilization as a contraceptive method. -Sampling strategy is not indicated.

-There was a high degree of sterilization regret (36.4%), and 18.2% of sterilized women desired future fertility.

3. Female Sterilization: The mean age of sterilization was 28 years of age with a range 21 – 39 years.

-More than half (56.4%) reported that HIV/AIDS was one of the reasons they chose to be sterilized.

-Sterilization regret was reported in 36.4%, and 18.2% of these women desired to become pregnant in the future.

- Age, education, reproductive history, sexual relationship, HIV history, AIDS diagnosis, and use of HAART medication found that women in a monogamous relationship had a statistically increased rate of regret compared to women who were not sexually active.

3	Barnes, D.B. & Murphy, S. 2009	-To explore women with HIV made reproductive decisions during a time of transition from HIV as potentially fatal to mothers and newborns.	N= 80 - HIV-positive women of childbearing age in three United States cities. -Setting: USA.	-Qualitative research. - Grounded theory.	- Women's decisions were based on their judgment of the relative weight of positive aspects of motherhood versus the often negative pressures of social and public opinion.	-Large number of participants (80 women) were interviewed by sociologists but were interpreted and analysed by a single researcher, dealing and analysing with huge transcripts were not indicated. - Number of interviewers is not indicated. - Authors do not explain how rigor was maintained in the study i.e member checks, reflexivity.
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No.	Authors	Objective of study	Samples/participants	Methodology/ Method	Key Findings	Strengths/ limitations
4	Beyeza-Kashesya, J., Ekstrom, A.M., Kaharuza, F., Mirembe, F., Neema, S. & Kulane, A. 2010	-To identify the determinants of the decision to have children among sero-discordant couples.	N= 114 couples , 228 individuals. -Couples receiving HIV care at four centres in Greater Kampala, Uganda. -Setting: Uganda.	-Quantitative research - Multivariate logistic regression modelling	-The majority, 59%, of the participants, desired to have children. -The belief that their partner wanted children was a major determinant of the desire to have children, irrespective of the HIV sero-status (adjusted odds ratio 24.0 (95% CI 9.15, 105.4). -Among couples in which the woman was HIV-positive, young age and relatives' expectations for children were significantly associated with increased fertility desire, while among couples in which the man was positive; knowledge of ART effectiveness was associated with increased fertility desire. Availability of information on contraception was associated with decreased fertility desire.	-Population, sample size and sampling strategy are clearly described. -The research design and statistical analysis is clearly described and appears thorough.
5	Brickley & Le Dung Hanh et al (2009)	-To explore discrimination experienced by HIV-positive pregnant and postpartum women.	N=20 -HIV-positive pregnant and postpartum women. -Setting, in Vietnam.	-Qualitative study -In-depth interviews -Semi-structured interviews and focus group discussion -Thematic analysis	- Community: participants described managing disclosure of their HIV infection because of fear of stigma and discrimination, particularly to the wider community. - Family: participants described not to disclose their HIV status to family members based on how they thought the information would be received. Because most of the participants were in stable health, those who chose to were usually able to hide their infection status. -2 primary reasons for not disclosing their HIV status to family members. First, participants	- Authors explain how rigor was maintained in the study i.e member checks by focus group participant discussion.

6	Carter & Kraft (2013)	-To describe the prevalence, correlates, and characteristics of the sexual activity, relationships, pregnancy intentions, HIV status disclosure, and contraceptive and condom use among US HIV-infected adolescents and young women.	N= 32 articles - searched Pubmed and relevant bibliographies - published from 2001 to July 2012 that described the prevalence, correlates, and characteristics of the sexual activity, relationships, pregnancy intentions, HIV status disclosure, and contraceptive and condom use among US HIV-infected adolescents and young women.	- Literature review	expressed concern about causing emotional trauma to family members. Second, many participants worried about being the object of HIV stigma and discrimination, and in particular that their children could face discrimination whether or not they were also infected. -Partner: most participants reported that their male partners were emotionally supportive through the difficult experience of pregnancy and motherhood.	- Like other youth not infected with HIV, substantial proportions of HIV-infected youth were sexually active, and most sought romantic or sexual relationships, though their serostatus may have affected the pace of physical and emotional intimacy. -Disclosure was difficult, and large proportions of HIV-infected youth had not disclosed their serostatus to recent partners. -A few studies suggest that most HIV-infected young women hoped to have children in the future, but many wanted to avoid pregnancy until later. -Only one study described contraceptive use among this population in detail and found that condoms were a primary method of contraception.	-This was a literature review based on topic of reproductive health behaviours in HIV positive young women in USA.
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No.	Authors	Objective of study	Samples/ participants	Methodology/ Method	Key Findings	Strengths/ limitations
7	Chersich, M.F. & Luchters, S.M.. (2008)	- To assess the effects of HIV infection on morbidity and needs of infected women for services in the first year postpartum.	N = 500 - 500 HIV+ women attending a child-health clinic in Mombasa, Kenya. -Setting: Kenya.	- Quantitative research -Cross-sectional study -Odds ratios - Chi square - t-test -Wilcoxon rank-sum test	1. Of 496 women, 54 were HIV infected (10.9%) 2. The median time since delivery was 3.3 months with no difference between HIV infected and uninfected women. 3. A substantial proportion of HIV infected women reported symptoms of fever, dyspnea, dysuria and complaints were less common in the uninfected group. 4. Painful, swollen, hot or red breasts was reported by 5.1% of HIV uninfected and 11.5% of HIV infected women. 5. Of 31.5% women had bacterial vaginosis.	-The research design was appropriate to address the aims of the research. -Population frame and sampling strategy were clearly described. - Validity and reliability of data collection tool were not described.
8	Chi & Rasch et al (2011)	-To explore of the social processes through HIV positive women.	N=20 - HIV positive women living. -Setting in Northern Vietnam.	-Ethnography -Open ended interviews	-Some women made their own decisions. While other complied with wishes of others, most often husband, relatives and health care providers. -these women came to the decisions that they had to make and shows that women's choices were configured through everyday social relations, shaped through intimate engagements with husbands, parents, siblings, and in-laws.	-The research design and method was appropriate to address the aims of the research. - Authors do not explain how rigour in the study was maintained.

No.	Authors	Objective of study	Samples/ participants	Methodology/ Method	Key Findings	Strengths/ limitations
9	Chi, B.K., Gammeltoft, T., Hanh, N.T.T. & Rasch, V. 2012	-To investigate contraceptive use among HIV-positive women.	N= 351 - Among HIV-positive women. -Setting, a Northern province of Vietnam.	-Quantitative -A cross-sectional study - Chi-square testing - Crude Odds ratios - Logistic regression analyses	- Of the 351 participants, 63% stated they had used contraception before HIV diagnosis and 89% stated they had used contraception after HIV diagnosis. -46% of the women had been using either the pill or an intrauterine device (IUD) before the diagnosis whereas the same applied for only 8% of the women after diagnosis. -39% stated they had been using condom before HIV diagnosis whereas 87% stated condom use after HIV diagnosis. -Condom use was more common among women who had received post-test counselling.	-The research design and method was appropriate to address the aims of the research. -Population frame and sample size were clearly described. - Validity of data collection tools were described but reliability was not described. - Statistical analysis was appropriate to measure the intended set of variables.
10	Cooper & Harries et al (2007)	-To investigate HIV positive's reproductive intentions.	N=60 -HIV+ Women (40) and men (20). -Setting: Cape town, South Africa.	-Qualitative research -In-depth interview	-Most of participants had strong desire for biological parenthood, have a child. Some of them avoid pregnancy -The important factors influences for considering to have a child are fear of partner and infant infection, having previous infected baby, perception of community disapproved of reproduction in these situation with HIV status. -Most of them had not discussion their reproductive desire and intentions with health care providers because they were anxious that they might face judgmental attitudes regarding their reproductive options.	-Data were analysed using a grounded theory approach but key components of grounded theory such as comparative method, theoretical sampling and memos were not indicated.

No.	Authors	Objective of study	Samples/ participants	Methodology/ Method	Key Findings	Strengths/ limitations
11	Cuca & Onono et al (2012)	-To examine factors associated with anticipating and experiencing HIV related stigma.	N= 1,777 -HIV positive pregnant women attending antenatal care clinics in rural Kenya.	Quantitative research	<p>-Women who were older, had less education, whose husbands had other wives, and who perceived community discrimination against people with HIV had significantly greater adjusted odds of anticipating HIV stigma.</p> <p>-Over half of the HIV-positive women interviewed postpartum reported having experienced stigma, much of which was self-stigma.</p> <p>-Women experiencing minor depression, and those whose family knew of their HIV status had significantly greater adjusted odds of experiencing stigma.</p> <p>-Lack of women's empowerment, as well as depression, may be important risk factors for HIV-related stigma and discrimination.</p>	<p>-The research design and method was appropriate to address the aims of the research</p> <p>-Population frame and sample size were described</p> <p>- Validity and reliability of tool s were described</p> <p>- Statistic analysis was appropriate to measure set of variables</p>

NO.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
12	Darak, S., Panditrao, M., Parchure, R., Kulkarni, V., Kulkarni, S. & Janssen, F. 2012	-To systematically retrieve, thematically categorize and review published research on PMTCT of HIV in India.	N= 167 papers - To focus on research related to the provision and/or utilization of the cascade of services provided in a PMTCT program in India.	-Systematic review	-A huge share of the empirical literature on PMTCT in India (N = 134) deals with epidemiological studies (N = 60). -The 46 papers related to utilization/provision of the cascade of PMTCT services were mostly from the four high HIV prevalence states in southern India and from the public sector. -Studies on experiences of implementing a PMTCT program (N = 20) show high rates of drop out of women in the cascade particularly prior to receiving ARV. -Studies on individual components of the cascade (N = 26) show that HIV counselling and testing is acceptable and feasible. -Literature on other components of the cascade - such as pregnant women's access to ANC care, HIV infected women's immunological assessment using CD4 testing, repeat HIV testing among pregnant women, early infant diagnosis and factors related to linking HIV infected women and children to postnatal care - is lacking.	-Demonstrated process of selecting studies by diagram.

NO.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
13	Demissie, D.B., Tebeje, B. & Tesfaye, T. 2014	-To determine fertility desire and associated factors among PLHIV attending ART clinic in Ethiopia.	N= 340 - HIV positive diagnosis and reproductive age, 18 to 49 years of age for women and 18 years and above for men. -Setting, in Ethiopia.	-Mixed method (Quanti-quali) -A cross-sectional study	-The prevalence of fertility desire of PLHIV in Fitcha Hospital was 133(39.1%) with 95% CI of (34.3% -44.3%). -Factors found to be associated with fertility desire were: Age from 18-29years and 30-39years Marital length \leq 4y, within 5-9years and 10-14years Had not biological living children and had more than one child Community pressure, partner fertility Duration HIV diagnosis \leq 1y Disclosed HIV sero-status and partner sero-difference - The main reasons mentioned for their current fertility desire were 36.8% wanted to replaced themselves, 38.3% did not have desired number of children and 20.3% believed that by using ART/PMTCT to get HIV free baby (perceived efficacy of PMTCT and ART).	-The mixed method design was appropriate to address the research purpose and research questions. -Population, sample size and sampling were described. - Validity of tools was described but reliability was not described. - Statistic analysis was appropriate to measure the intended set of variables in the quantitative part of the study.

NO.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
14	Doull & O'Connor et al (2006)	-To examine HIV positive women's decision making in the context of pregnancy and HIV/AIDS.	Not Given number of papers.	-Review papers -The Ottawa Decision-Support Framework was used to assemble evidence of women's decision-making needs	-Several gaps knowledge about women's decision making in the context of pregnancy and HIV were identified. -The availability of evidence varied for each decision, the significant gaps included: evidence around testing for ones status, advanced directives for self and child, disclosure (specifically, the impact of), others perceptions of antiretroviral use and data on termination of pregnancies. -Conclusion: Decision making as a concept was generally not addressed in the MTCT literature. Evidence regarding the perceptions of women and others regarding the various decisions was often not available and subsequently an important aspect of MTCT interventions neglected.	- Using The Ottawa Decision-Support Framework to assemble evidence through data bases and included grey literature sources. -Number of selected papers was not described.
15	Marcellin et al 2010	-To explore factors associated with the desire to have a child.	N= 1,433 - among ART-treated fertile HIV women aged <50 -Setting: Cameroon.	-Quantitative research - Logistic regression analysis	-A total of 791 women (55%) reported the desire to have a child. -After adjusting for age, matrimonial status, number of biological children, and sexual activity, the main factors independently associated with this desire in a multivariate analysis were having a good physical health-related quality of life and a CD4 count at ART initiation <200 cells/mm ³ .	-Large sample size but population and sampling strategy were not clearly indicated. - Validity and reliability of tools were not described. - Statistical analysis was appropriate to measure the intended of variables.

NO.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
16	Ferguson & Grant et al., (2014)	-To assess attrition between women testing HIV positive in pregnancy-related services and accessing long-term HIV care and treatment services.	N=100 -HIV positive women within pregnancy-related services in a district hospital in Kenya.	- A mixed methods prospective cohort study. (Quali-quant) - Multivariable logistic regression analysis. -Thematic analysis.	-(53%) women registered at an HIV clinic within 90 days of HIV diagnosis, (41%) women were eligible for immediate antiretroviral therapy (ART); only 6/11(55%) started ART during study follow-up. -Factors associated with registration at the HIV clinic within 90 days of HIV diagnosis were: having cared for someone with HIV, not having to pay for transport to the hospital, and having received enough information to decide to have an HIV test. -Qualitative data revealed multiple factors underlying high patient drop-out related to women's social support networks (e.g.partner's attitude to HIV status), interactions with health workers (e.g. being given unclear/incorrect HIV-related information) and health services characteristics (e.g. restricted opening hours, long waiting times).	- The mixed method design was appropriate to address the research purpose. -Population frame and sample size were clearly described. - Validity of tool was described but reliability was not described. - Statistic analysis was appropriate to measure the intended set of variables in the quantitative part of the study. -Recruitment of participants in qualitative part was appropriate. -Cohort recruitment and follow-up were clearly described.

NO.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
17	Finger & Clum et al (2012)	-To examine the association between desire for pregnancy (DFP) and both sociodemographic variables and sexual risk behaviors.	N=130 -130 young women HIV positive. -Setting: In USA.	-Quantitative research -cross-sectional study - Bivariate and multivariate regression analyses. - Multivariate analyses	- DFP was associated with increased rates of intercourse, decreased condom use, increased partner concurrency, increased rates of unprotected sex with a nonconcordant partner, and a higher number of previous sexually transmitted infections (STIs). - DFP was associated with increased likelihood of recent intercourse, condom-unprotected sex, and oral sex. -DFP was related to few sociodemographic variables but was associated with having fewer children currently, a history of victimization, and decreased rates of disclosure of HIV status. -The few sociodemographic variables that were associated with DFP suggest that social relationships may play a role in DFP. -DFP was associated with sexual behaviours that may place young women at risk for STI acquisition and secondary HIV transmission to partners.	-Population and sample size were described but sampling strategy was not clearly described. - Validity and reliability of all sections of the tools were clearly described. - Statistical analysis was appropriate to measure the intended variables.

NO.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
18	Finocchiaro-Kessler & Dariotis et al. (2010)	-To assess frequency and determinants of discussions between HIV-infected women and their HIV providers.	N=181 - African American HIV-infected women of reproductive age. -Setting, USA.	-Quantitative -Cross-sectional - Audio computer-assisted self-interview (ACASI) - Descriptive statistics and multivariate analysis	-Of the 181 women interviewed, 67% reported a general discussion about pregnancy and HIV while 31% reported a personalized discussion about future childbearing plans with their provider. -Of the personalized discussions, 64% were patient initiated. -Unmet reproductive counselling needs were higher for personalized discussions about future pregnancies (56%) than general discussions about HIV and pregnancy(23%). -Younger age was the most powerful determinant of provider communication about pregnancy. -A significant proportion of HIV-infected women want to talk about reproductive plans with their HIV provider; however, many have not.	-Population and sampling strategy were not described. - Validity and reliability of the tools were not indicated. - Statistic analysis was appropriate to measure the intended of variables and answer the research questions.
19	Firth & Wang (2012)	-To identify trends in demographics, viral control, terminations, miscarriages, timing of diagnosis, and adherence to follow up.	N= 76 -HIV-infected pregnant women and their children in Rhode Island between January 2004 and December 2009. -Setting: Rhode Island, USA.	-Quantitative -Descriptive study -Percentage, Mean, correlation analysis and Chi square test	-76 HIV-infected women became pregnant, with a total of 95 pregnancies. 79% of the women knew their HIV status prior to becoming pregnant. 54% of the women were foreign-born and 38% of the 16 women who chose to terminate their pregnancies were foreign-born. -The number of HIV-infected women becoming pregnant has increased, the proportion that are foreign-born has been rising, from 41 percent between 2004 and 2005 to 57.5 percent between 2006 and 2009.	-More demographic data on the women was needed i.e education level, socioeconomic data, and data on their nature of the women's relationship with their partners because the purpose of the study was focused on trend of demography.

NO.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
20	Gay, J., Hardee, K., Croce-Galis, M. & Hall, C. (2011)	-To review the evidence of what works to meet the sexual and reproductive health needs of women living with HIV in developing countries.	N=35 papers - Eighth general interventions using various methods of implementation science from 15 countries.	A systematic review	-A range of successful and promising interventions to improve the sexual and reproductive health and rights of women living with HIV include: providing contraceptives and family planning counselling as part of HIV services; ensuring early postpartum visits providing family planning and HIV information and services; providing youth-friendly services; supporting information and skills building; supporting disclosure; providing cervical cancer screening; and promoting condom use for dual protection against pregnancy and HIV. -Provision of ART can also increase protective behaviours, including condom use.	-Methodology used for selecting the papers is not clearly described. The number of included papers is not described. -Authors did use a specific 5 level of Gray's scale to evaluate the strength of the studies. - Number of records identified through databases were not described. -Eligible inclusion and exclusion criteria were not clearly described.
21	Giles & Hellard et al. (2009)	-To explore HIV-infected women's experiences of considering and using recommended interventions during pregnancy and postpartum to reduce mother-to-child transmission of HIV.	N= 45 - HIV-infected women aged 18-44 years living in Melbourne, Australia.	-Qualitative research -In-depth interview	The 15 women who had their children after their HIV diagnosis engaged in significant <i>work</i> including: -surveillance and safety work to minimise stigma and infection. -information work to inform decisions and actions -accounting work to calculate risk and benefit. -hope and worry work concerning a child's infection status. -impact of interventions work to redefine.	There is some confusion about the number of participants, the authors recruited 45 women but chose to analyse data from 15 eligible women. The findings reported in this study actually represent 15 women's experiences.

					-an acceptable maternal identity work to prepare.	
					-an alternative story to counter the disclosure effect of the intervention and emotional work to reconcile guilt when considering these interventions.	
22	Gogna, ML. et al. (2009)	- To explore the perspective of contraceptive and experiences and needs of people living with HIV and perspective of health care providers.	N = 841 - n=841 for questionnaire survey and n=89 for interview. -Setting: study in 22 provinces in Argentina.	- 2 nd study from 2 previous projects. - Quantitative and qualitative research. - Quantitative and qualitative analysis method - Atlas-ti software	1.Half of women samples had been unintended pregnancy. 2.Majority reported systemic condom use. 3.64% of women did not want a new pregnancy. 4.Most physicians encourage only condom use while a minority refers patients to family planning providers or talk with them about contraception. 5. A lack of updated information about interaction between ARV drugs and hormonal contraception.	-Population and sample size were described but sampling strategy was not clearly described. - Validity of tool was indicated.
23	Gruskin (2012)	-To assemble a collection of papers from range of relevant disciplinary perspective of pregnancy decision for HIV + women.	HIV positive women.	Review literature	The disciplinary perspective of pregnancy decision for HIV + women are: -contraception -safe pregnancy -delivery and breast feeding -safe abortion	- This paper is an editorial, it gave a deep insight to analyse and describe the findings. -Wide range of relevant disciplinary perspective of pregnancy decision for HIV + women.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
24	Hardon A & Vernooij E et al (2012)	-To describe on the quality of information provision and counselling and disclosure patterns and to identify how services can be improved to enable better PMTCT outcomes.	N= 408 - 63 HIV-positive women were been interviewed. -Setting, Burkina Faso, Kenya, Malawi and Uganda.	-Mixed-methods study - Qualitative – quantitative design -Semi-structured interviews -In-depth interviews -Quantitative data using Fisher's exact tests	-The majority of pregnant women (84%) was not hard to be tested, most of them attending antenatal care (80-90%) report that they were explained the meaning of the tests, explained how HIV can be transmitted, given advice on prevention, encouraged to refer their partners for testing, and given time to ask questions. -79% of HIV-positive pregnant women reported that they generally keep their status secret; only 37% had disclosed to their partner. -The large majority (85%) felt that the health workers and counsellors respected their desire for confidentiality by protecting their results.	- The mixed method design was appropriate to address the research purpose. -Population frame and sample size were described. - Validity of tool in quantitative part was described but reliability was not described. - Statistical analysis was appropriate to measure the intended set of variables in the quantitative part.
25	Hanh,N.T.T et al. (2009)	- To examine the role of health staff in supporting HIV-infected pregnant women.	N = 23 - 23 women living with HIV/AIDS. - PLWH in Vietnam.	- Qualitative; Grounded -In-depth interview - Observation - Snow ball techniques.	1. There was strong links between health staffs, member club and HIV-infected mother to provide training in maternal and child care. 2. Overall the women believed they were being supported by health staff. 3. Post-test counselling, women received both emotion support and help to make hard decisions regarding whether or not to maintain their pregnancies.	-The authors indicated that they applied grounded theory approach just into analysis step but not included to data collection and whole method. According to Grounded theory is a process and product, it should apply as a method of the study. -Other GTM components are not indicated such as CCM, theoretical sampling, memos and rigours.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
26	Harrington, E.K., Newmann, S.J., Onono, M., Schwartz, K.D., Bukusi, E.A., Cohen, C.R. & Grossman, D. (2012)	-To explore the fertility intentions and family planning (FP) preferences of Kenyan women accessing HIV treatment.	N= 30 - HIV-positive women aged 18–45 accessing HIV treatment. -setting, in Kenya.	-Qualitative research - Grounded theory approach	-Fears of premature death, financial hardship, and perinatal HIV transmission emerged as reasons for participants' desire to delay/cease childbearing. -Participants strongly identified FP needs, 2/3 were using male condoms alone or no modern method of contraception. -Women preferred the HIV clinic as the site of FP access for reasons of convenience, provider expertise, and a sense of belonging, though some had privacy concerns.	-Grounded theory approach just applied at analysis step not as a method. -According to Grounded theory is a process and product, it should apply as a method of the study. -Other GTM components are not indicated such as CCM, theoretical sampling, memos and rigours.
27	Hernando, V & Alejos, B et al. (2014)	-To evaluate reproductive desire and to analyse the associated sociodemographic and clinical factors in HIV-infected women. in the Spanish AIDS Research Network Cohort (CoRIS).	N= 134 - Setting, in Spain.	A mixed qualitative-quantitative approach	-84% of participants had been infected with HIV through unprotected sex, with a median time since diagnosis of 4.5 years. -Reproductive desire was found in 49% of women and was associated with: 1) Age (women under 30 had higher reproductive desire than those aged 30-39; 2) having no children vs. already having children. 3) Being an immigrant and 4) Not receiving antiretroviral treatment. -The main reasons for wanting children were related to liking children and wanting to form a	-The consequences of qualitative – quantitative design and method were appropriate to research purpose and research questions. -Population frame and sample size were described. - Validity and reliability of tool s were not described - Statistic analysis was appropriate to measure set of variables in quantitative part. -Recruitment of participants in qualitative part was appropriated.

family.

-Reasons for not having children were HIV infection, older age and having children already.

-Half of the women had sought or received information about how to have a safe pregnancy, 87% had disclosed their serostatus to their family circle, and 39% reported having experienced discrimination due to HIV infection.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
28	Huntington & Thorne et al (2013)	-To describe predictors of pregnancy and changes in pregnancy incidence among HIV-positive women accessing HIV clinical care.	N= ? - A national surveillance study of HIV-positive pregnant women. -Two separate studies: The UK Collaborative HIV Cohort study (UK CHIC), a cohort of adults attending 13 large HIV clinics; and The National Study of HIV in Pregnancy and Childhood (NSHPC).	Quantitative study Cohort study	-The number of women accessing care at UK CHIC sites increased as did the number of pregnancies. -Older women were less likely to have a pregnancy relative rate 0.44 per 10 year increment in age, as were women with CD4 cell count less than 200 cells/ μ l compared with CD4 cell count 200-350 cells/ μ l and women of white ethnicity compared with women of black African ethnicity. - The likelihood that women had a pregnancy increased over the study period. -The rate of change did not significantly differ according to age group, antiretroviral therapy use, CD4 group or ethnicity.	-Large number of samples size and population and sampling strategy were clearly described. - Validity and reliability were not described. - Statistic analysis was appropriate to measure the level of variables.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
29	Hussain A & Moodley D et al (2011)	-To describe pregnant women's access to PMTCT and HAART services and associated birth outcomes.	N=1,609 - Women recuperating in postnatal wards, their access to VCT, CD4 Counts, dual ART or HAART during pregnancy. -Setting, in South Africa.	-Quantitative research -Cross sectional study	-39% of all tested HIV-positive during their pregnancy, 2.9% of HIV-positive did not have a CD4 count done and an additional 31.3% did not receive their CD4 results. -The majority (96.8%) of the HIV-positive women commenced dual ART at their first antenatal visit independent of their CD4 result. -During February-May 2010, 48.0% of the women who had a CD4 result were eligible for HAART (CD4<200 cells/mm and 29.1% of these initiated HAART during pregnancy. -Under the current South African PMTCT guidelines 71.1% (95%CI66.4-75.4%) of HIV positive pregnant women could be eligible for HAART (CD4<350 cells/mm.. -There were significantly more preterm births among HIV-positive women (p=0.01) and women who received HAART were no more at risk of preterm deliveries as compared to women who received dual ART. -9 HIV exposed infants were confirmed HIV infected at birth. -The in-utero transmission rate was highest among women who required HAART but did not initiate treatment (8.5%) compared to 2.7% and 0.4% among women who received HAART and women who were not eligible for HAART and received PMTCT prophylaxis.	-Large number of samples size and sampling strategy was indicated. - Validity and reliability were not described. - Statistic analysis was appropriate to measure the level of variables. -Using good diagram and pie charts to demonstrate some data.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
30	Kakaire, O., Osinde, M.O. & Kaye, D.K. (2010)	-To analyse fertility desires among persons living with HIV.	N= 400 - 400 HIV positive patients male and female. -Setting, at a treatment centre in Kabale Hospital, Southwestern Uganda.	-Quantitative research - Bivariate and multivariate analysis	-Of the 400 respondents, (25.3%) were male, 47.3% were aged 25-34 years, over 85% were currently married or had ever been married, and the 62% had primary level of education or less. -Over 17% had produced a child since the HIV diagnosis was made, and 28.6% reported that they would like to have a child in the near future. -Age of the respondent, being single (versus being ever-married) and whether any of the respondents' children had died were inversely associated with fertility intentions.	-Using participant's criteria to choose samples but population and sampling strategy were not described. - Validity and reliability were not described. - Statistic analysis was appropriate to measure the level of variables.
31	Kaida, A., Laher, F., Strathdee, S.A., Janssen, P.A., Money, D., Hogg, R.S. & Gray, G. (2011)	-To investigate whether the intention to have children varied according to HIV status and use of highly active antiretroviral therapy (HAART).	N=457 -215 were HIV- positive and HAART- naive, and 242 were HIV negative. - In Soweto, South Africa.	-Quantitative research -Analysis; logistic regression	-Overall, 44% of women reported intent to have children, with significant variation by HIV status: 31% of HAART users, 29% of HAART-naive women, and 68% of HIV-negative women ($P <$.001). -In adjusted models, HIV-positive women were nearly 60% less likely to report childbearing intentions compared with HIV-negative women, with minimal differences according to use or duration of HAART.	-Using participant's criteria to choose samples and described. - Validity and reliability were clearly described. - Statistic analysis was appropriate to measure the level of variables.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
32	Kanniappan, S., Jeyapaul MJ. & Kalyanwala, S. (2008)	-To explore fertility desires, intentions and fertility decision-making in WLHA and the barriers they face in fulfilling these desires.	N=43 - WLHA aged 18–35 years and 10 key informants. -In Namakkal district, Tamil Nadu, India.	-Qualitative research -In-depth interview	<p>-The women were classified according to whether or not they had living children and, within that, whether they had experienced abortion, wanted more or any children or were pregnant.</p> <p>-The main factors distinguishing women who wanted to have a child and those who did not were their levels of anxiety about the future and available family support.</p> <p>-Women who indicated that they did not have family support and were stigmatised by the family were reluctant to opt for a pregnancy as they were not sure of the future, including child care in event of parental death.</p> <p>-In contrast, those women who decided to have a child did so based on family support, especially when family members offered to take care of the child in the future in the event of parental death.</p> <p>-Awareness and access to PPTCT and ARV was another key factor guiding the final decision on child bearing.</p>	<p>-The authors tried to compare women between 2 groups, women with living children and with no living children. Other designs and statistics analysis should be considered to measure and compare between 2 groups.</p> <p>- Ethical consideration not indicated.</p>

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
33	Kavanaugh & Moore et al (2013)	-To describe community attitudes towards each of two possible elective outcomes of an HIV-positive woman's pregnancy.	N= 4,853 - Women and men 2401 in Zambia and 2452 in Nigeria people in communities.	- Quantitative research - Bivariate and multivariate analyses	- Respondents from both countries overwhelmingly favoured continued childbearing for HIV-positive pregnant women, but support for induced abortion was slightly higher in scenarios in which anti-retroviral therapy (ART) was unavailable. -Zambian respondents held more stigmatising attitudes towards abortion for HIV-positive women than did Nigerian respondents. -Women held more stigmatising attitudes towards abortion for HIV-positive women than men, particularly in Zambia.	-Large number of samples size and sampling strategy was indicated (multi-stages, cluster sampling). - Validity and reliability were described. - Statistic analysis was appropriate to measure the level of variables. -Using no tables or figures to demonstrate some data which might be better for understanding.
34	Kelly & Alderdice et al. (2013)	-To explore HIV positive women's experiences of pregnancy and maternity care, with a focus on their interactions with midwives.	N= 10 -HIV positive pregnant women. -Setting in North Ireland.	-Qualitative research - Narrative approach -In-depth interview -Nvivo 7 analysis programme	-The pervasive presence of HIV related stigma threatened the women's experience of pregnancy and care. -The key staff attributes that facilitated a positive experience were knowledge and experience, empathy and understanding of their unique needs and continuity of care, a negative experience were lack of communication, lack of knowledge and experience.	- The research design and recruitment were appropriate to address the aims of the research. -Ethical consideration was indicated. -Some rigour was claimed.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
35	Kennedy, C.E., Osborne, K., Spaulding, A.B., Brickley, D.B., Almers, L., Mirjahangir, J., Packel, L., Kennedy, G.E., Mbizvo, M. & Collins, L. (2010)	-A systematic review of the evidence for interventions linking SRH and HIV.	N= 35 papers -185 studies were included in the review and 35 were analysed.	A systematic review	-The majority of studies showed improvements in all outcomes measured. While there were some mixed results, there were very few negative findings. -Generally, positive effects were shown for key outcomes, including HIV incidence, sexually transmitted infection incidence, condom use, contraceptive use, uptake of HIV testing and quality of services. -Promising practices (n = 23) tended to evaluate more recent and more comprehensive programmes. -Factors promoting effective linkages included stakeholder involvement, capacity building, positive staff attitudes, non-stigmatizing services, and engagement of key populations.	-Specified number of paper and selecting papers were clearly describe as a systematic review. - Records identified through data bases were described. -Eligible criteria inclusion and exclusion were clearly described. -Not used PICO criteria but used other criteria to select papers.
36	Kikuchi & Wakasugi N et al (2011)	To investigate factors associated with unintended pregnancies after knowing seropositive status, and also factors associated with the non-use of contraceptives among HIV positive women under ART.	N= 565 -HIV positive women under ART. -Setting, Rwanda.	-Quantitative research -A cross-sectional study	-Among all the respondents (n = 565), 132 women became pregnant after knowing their HIV seropositive status. Among them, 82 (62.7%) got pregnant unintentionally. Those who had two or more children (adjusted OR, 3.83) were more likely to get pregnant unintentionally. Meanwhile, among all, 263 had sexual intercourse during the last three months. Of them, 85 women did not use any contraceptives. Those who did not agree that 'HIV positive children can survive as long as HIV negative children' (adjusted OR, 2.28), and those who 'can always ask partner to use a condom' (adjusted OR, 9.83), were more likely to use contraceptives.	-Population and samples size and sampling strategy were described (Population =samples size). - Pretest and revised the tool before collecting data. - Statistic analysis was appropriate to measure the level of variables. -Using tables to demonstrate some data which better to understand.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
37	King, R., Khana, K., Nakayiwa, S., Katuntu, D., Homsy, J., Lindkvist, P., Johansson, E. & Bunnell, R. (2011)	-To examine relationships between HIV, ART and pregnancy, desire for children, perceived risks and benefits pregnancy, decision-making regarding reproduction and family planning (FP).	N= 29 women and 16 male partners -On ART with four purposively selected categories of participants: pregnant, not pregnant, delivered, and aborted. - Setting, in Uganda.	-Qualitative research -In-depth interview	-Among those who had conceived, most couples stated that their pregnancy was unintentional, and often occurred because they believed that they were infertile due to HIV. -Perceived reasons for women not getting pregnant included: ill health (included HIV infection and ART), having enough children, financial constraints, fear of mother-to-child HIV transmission or transmission to partner, death of a child, and health education. -Most women reported FP experiences with condoms and hormonal injections only.	- Research design was appropriate to address the aims of the research. - The data analysis was sufficiently rigorous by members and Nvivo software.
38	Kipp, W., Heys, J., Jhangri, G.S., Alibhai, A. & Rubaale, T. (2011)	-To determine how HIV-infected persons on HAART have different fertility desires compared to persons not on HAART, and if the knowledge about HIV transmission from mother-to-child is different in the two groups.	N=199 - Comparing two groups of HIV-positive participants: those who were on HAART and those who were not. -In Uganda.	-Quantitative -A cross-sectional survey - Bivariate and multivariate logistic regressions	-The significant predictors for desiring more children were younger age, having a higher number of living children and male sex. -Knowledge of the risks for mother-to-child-transmission of HIV was similar in both groups. -The HAART treatment status of HIV patients in this study did not influence the desire for children. The non-significant association between the desire for more children and the HAART treatment status could be caused by a lack of knowledge in HIV-infected persons/couples about the positive impact of HAART in reducing HIV transmission from mother-to-child.	-Using participant's criteria to choose samples but population and sampling strategy were not described. - Validity and reliability were clearly described. - Statistic analysis was appropriate to measure the level of variables.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
39	Kisakye Peter, Wilfred Owot Akena. & Dan Kabonge Kaye (2010)	-To explore and gain deeper understanding of reasons why women conceive when they are HIV-positive.	N=22 -HIV-positive women who came for delivery -Setting, in Mulago Hospital, Uganda.	-Qualitative research -In depth interviews and focus group discussion -Content analysis.	<p>-Awareness and belief in vertical transmission risk reduction strategies; disclosure of HIV status; awareness of spouse's HIV sero-status; availability of antiretroviral therapy; gender issues with desire for parenthood; stigma of HIV and childlessness; influence of partners and family members; and the impact of the health of self and family members were factors that motivate HIV-positive women to conceive or influence pregnancy decisions in spite of their sero-status.</p> <p>-The reasons advanced as to why women decided to conceive when they were HIV-positive were mainly personal such as desire for a child, desire for a child of a different sex they, did not have, prior child loss, prior abortions, consideration that it was important to have a child, still feeling healthy and other children were not infection.</p> <p>- There was a strong perceived community and societal disapproval of pregnancy and childbearing in HIV-positive women.</p>	-The authors used in-depth interviews and focus group discussion to delve into the data. Focus group discussion among HIV positive women with sensitive and confidential issues may affect to women related to ethic concerns and HIV disclosure to each other. Because women may hesitate or limit to talk many or some topics while having others to listening.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
40	Kotzé & Visser et al (2013)	-To identify psychosocial variables related to the use of coping strategies by HIV-positive.	N=224 -South African women diagnosed during pregnancy.	-Quantitative research -Linear regression analysis	<p>-Two coping styles, active and avoidant coping, were assessed using an adapted version of the Brief COPE.</p> <p>- Psychosocial variables associated with changes in coping over time were identified with mixed linear analysis.</p> <p>-Increases in active coping were associated with decreasing levels of internalized stigma and depression, increasing self-esteem and positive social support, knowing someone who is living with HIV, being physically healthy and living above the poverty line.</p> <p>-Increases in avoidant coping were associated with increasing internalized stigma and depression, lower levels of self-esteem, HIV-knowledge and lower levels of education.</p>	<p>-Sample size and sampling strategy were described.</p> <p>-Validity and reliability were clearly described.</p> <p>- Statistic analysis was appropriate to measure the level of variables.</p>

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
41	Leonard, A.D., Markham, C.M., Bui, T., Shegog, R. & Paul, M.E. 2010	-To understand the experiences of both HIV-positive youth and health care providers about attitudes and perceptions of such youth toward sexual risk reduction and disclosure of their HIV status.	N= 35 - 20 HIV-positive youth (aged 13-24) and 15 health care providers. - Setting, USA.	-Qualitative research -In-depth interviews -Thematic data analysis -ATLA, ti. software	-18 of the 20 youth had disclosed their HIV status to another individual at least once, 11 reported being sexually active, and three of these had been perinatally infected. -There were four subthemes related to disclosure: 1.stigma and emotions 2.trust issues 3. reasons for disclosing and 4.strategies for addressing disclosure. - Five subthemes were identified related to sexual risk reduction 1. dating challenges 2.attitudes toward condom use 3. self-efficacy for condom use negotiation 4.pregnancy attitudes and 5.sexual risk reduction strategies.	- Youth aged 13-24 years were defined as adolescent by CDC. - The recruitment strategy and data collection were appropriate to the aims of the research.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
42	Liamputtong, P. et al. (2014)	-To explore the experience of pregnancy, motherhood and infant feeding practice among Thai women living with HIV/AIDS.	N = 26 - Thai women living with HIV/AIDS. Pregnant = 1 case Have 1 child=12 cases Have 2-3 children =13 cases - Public hospital at Bangkok, Thailand.	- Qualitative; Phenomenology -In-depth interview - Purposive sampling and snowball techniques. -Thematic, coding and named	1. Pregnancy experiences - shock and fear with HIV+ status - living with constant anxiety about their babies - many women didn't wish to keep preg.(unintended preg.), they want to do abort but GA↑ - some of them changes to keep preg. because of family. 2. Motherhood - multiple anxieties/worried toward their health and baby - great concerns about baby would have HIV - be strong to live for their children - no more children 3. Infant feeding practice - advised by health care providers that no feed breast milk for newborn - hard to say to others that why not breast feed their child (conceal their HIV status) - some women had problem with economic, they had no money enough to buy artificial milk.	- The recruitment strategy and data collection were appropriate to the aims of the research.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
43	Loutfy & Hart et al (2009)	-To assess the fertility desires and intentions of HIV-positive women of reproductive age living in Ontario, Canada.	N= 490 -HIV-positive women -Setting, in Ontario, Canada.	-Quantitative study -A cross-sectional study - Multivariable model - Logistic regression models	-Of total 490 respondents, 69% desired to give birth and 57% intended to give birth in the future. -The significant predictors of fertility intentions were: younger age (age<40) (p<0.0001), African ethnicity (p<0.0001), living in Toronto (p = 0.002), and a lower number of lifetime births (p = 0.02).	-Sample size and sampling strategy were clearly described. -Validity and reliability were clearly described. -Statistic analysis was appropriate to measure the level of variables and addressed to the research questions.
44	Loutfy, M., Masinde, K., Tharao, W., Linklater, G., Salam, K., Ongoiba, F., Angel, J., Smaill, F., Rachlis, A., Ralph, E., Walmsley, S., Raboud, J., Wong, J., Yudin, M., Diong, C., Blitz, S., Margolese, S., Hart, T., Ogilvie, G. & Ontario HIV Fertility Research Team 2012	- To investigate rates and correlates of unintended pregnancies among HIV-positive women of reproductive age.	N= 416 -HIV-positive women of reproductive age (18–52 years) living in Ontario, Canada.	- Quantitative study -A cross-sectional study - Multivariable model	-HIV-positive women who were previously pregnant (53% before and 47% after HIV diagnosis) and their last pregnancy was a median of 8 years prior to the survey(n=283). -Of the 416, 56% identified that their last pregnancy was unintended (57% before and 54% after HIV diagnosis). - The significant correlates of unintended pregnancy after HIV diagnosis were: marital status (P=0.01) and never having given birth (P=0.01). -Women were less happy if their pregnancy was unintended (P<0.01).	-Using participant's criteria to choose samples but population and sampling were not described. -Validity was described but reliability was not given. -Statistic analysis was appropriate to measure the level of variables and addressed to the research questions.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
45	MacCarthy et al. (2012)	- To carry out a review of literature to ascertain the current state of knowledge and highlight areas requiring further attention about the pregnancy decision of HIV+ women.	<p>N= 214 papers</p> <p>- Reviewed by inclusion and exclusion criteria = 420.</p> <p>- Number included in analysis in final = 214 papers.</p> <p>peer-reviewed literature = 125</p> <p>conference abstracts =40</p> <p>website and online publications =49.</p>	-Systematic literature reviewed.	<p>Finding presented by the types of pregnancy-related intentions and desire that HIV+ women want to fulfil, divided into aspects;</p> <p>- HIV+ women wish to prevent pregnancy</p> <p>- Coerced sterilization</p> <p>-Safer pregnancy</p> <p>- HIV+ women wish to terminate pregnancy</p> <p>- Interaction with the health system</p> <p>-HIV testing</p> <p>-Integration of services</p> <p>-Health worker attitudes</p> <p>-Stigma, discrimination and legal barriers</p> <p>-Attention to key populations</p>	<p>-Used PRISMA guideline to apply the method of selecting papers to be analysed.</p> <p>-Specified number of paper and selecting papers were clearly describe as a systematic review.</p> <p>- Records identified through data bases were described.</p> <p>-Eligible criteria inclusion and exclusion were clearly described.</p>

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
46	Makin & Forsyth et al (2008)	-To provide understanding of social and psychological factors that affect disclosure of HIV status among women diagnosed HIV-positive in pregnancy.	N= 293 - HIV positive women attending antenatal al clinics in Pretoria, South Africa.	-Quantitative study -A longitudinal study -Logistic regression analysis	-59% had disclosed to their partners and 42% to others. - Factors associated with having disclosed to partners were identified being married, prior discussion about testing, having a partner with tertiary education and less experience of violence. -Better housing, less financial dependence on partners, and knowing someone with HIV were associated with disclosure to others. -Increased levels of stigma at baseline decreased the likelihood of disclosure to partners post-enrolment and increased levels of avoidant coping decreased subsequent disclosure to others.	-Population and Sample size and sampling strategy were clearly described. -Validity and reliability were clearly described. - Statistic analysis was appropriate to measure the level of variables and addressed to the research questions.
47	Maman, S. & Moodley, D et al (2011)	-To understand the ways that men are currently engaged and the barriers to their greater involvement.	N=46 - 30 HIV-positive women and 16 HIV-negative women. -Setting, South Africa.	- Qualitative research -In-depth interview	Although less than a quarter of women reported that their partners accompanied them to the clinic, they described receiving other material and psychosocial support from partners. More HIV-positive women reported that their partners were not involved or not supportive, and in some cases direct threats and experiences with violence caused them to fear partner involvement.	-The research design and methodology appropriate to address the aims of the research.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
48	McCall, J. & Vicol, L. 2011	-Review article	N/A	Review article	<p>-The current evidence indicates that HIV-infected women can have excellent outcomes from a combination of hormonal contraception and condoms.</p> <p>-In general, women are more familiar with the hormonal methods and more open toward them.</p> <p>-Women are individuals in terms of what will work best for them in the circumstances in which they find themselves.</p> <p>-A number of contraceptive options are suitable for women living with HIV, and all HIV-infected women should be supported to make decisions about the most appropriate contraception for themselves and their partners.</p>	-General review article based on HIV positive women and contraception.
49	Medema-Wijnveen & Onono et al (2012)	-To explore relationships between women's perceptions of HIV-related stigma and their attitudes and intentions regarding facility-based childbirth.	<p>N=1,777</p> <p>-1,777 pregnant women.</p> <p>-Setting, Kenya.</p>	-Quantitative research	-Women who anticipated HIV-related stigma from their male partner had lower adjusted odds of having positive attitudes about giving birth at the health facility and less positive attitudes about health facility birth were strongly related to women's intention to give birth outside a health facility.	<p>-Large sample size.</p> <p>-Using participant's criteria to choose samples but population and sampling were not described.</p> <p>-Validity and reliability were clearly described.</p> <p>-Statistic analysis was appropriate to measure the level of variables and addressed to the research questions.</p>

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
50	Minnie, Walt & Klopper (2009)	-To establish research evidence regarding factors influencing counselling for HIV testing during pregnancy by means of systematic review, forming part of a larger study using a variety of evidence to develop best practice guidelines. Design. Systematic review.	N=33 studies	A systematic review	<p>-Themes: effects of counselling, quality of counselling, group vs. individual counselling, ways of offering HIV testing, rapid testing, counselling and testing during labour, couple counselling and testing, counsellor and organisational factors.</p> <p>- According to research evidence, factors such as whether counselling is presented in a group or individually, different ways to present HIV testing as well as counsellor and organisational factors can influence counselling for HIV testing during pregnancy.</p> <p>-Best practice guidelines for settings very dissimilar from where the research was done, research evidence must be contextualised. Relevance to clinical practice. Implementation of the best practice guidelines may lead to the increased uptake of HIV testing in pregnancy in developing countries like South Africa and thus to an increase in the number of women whose status is known when their babies are born.</p>	<p>-Used 2 Cochrane reviews to apply the method of selecting papers to be analysed.</p> <p>-Specified number of paper and selecting papers were clearly describe as a systematic review.</p> <p>- Records identified through data bases were described.</p> <p>-Eligible criteria inclusion and exclusion were clearly described.</p> <p>-Critical appraisal used “good qualitative evidence”.</p>

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
51	Mmbaga & Leyna et al (2013)	-To describe information on fertility desire and intention would assist in the integration of sexual and reproductive health in routine care and treatment clinics.	N=410 -Men and women who living with HIV aged 15-49. -Setting. in Kahe ward in rural Kilimanjaro Tanzania.	-Quantitative study -A cross-sectional study - Analysed using STATA statistical software.	-51% reported to be married/cohabiting, 73.9% lived with their partners and 60.5% were sexually active. -The rate of unprotected sex was 69.0% with 12.5% of women reporting to be pregnant at the time of the survey. -Further biological children were desired by 37.1% of the participants and lifetime fertility intention was 2.4 children. -Increased fertility desire was associated with living and having sex with a partner, HIV disclosure, good perceived health status and CD4 count ≥ 200 cells for both sexes. -Reduced desire was associated with having more than 2 children among females, divorce or separation, and having a child with the current partner among both males and females.	-Using participant's criteria to choose samples but population and sampling were not described. -Validity and reliability were not described. -Statistic analysis was appropriate to measure the level of variables and addressed to the research questions.
52	Moodley, J., Cooper, D., Mantell, J.E. & Stern, E. (2014)	-To explore health care providers' knowledge and perspectives on safer conception and alternate parenting strategies for HIV-positive people.	N= 28 -4 doctors, 20 nurses, 3 counsellors and 1 general assistant. -in Cape Town, South Africa.	Qualitative research -In-depth interview -Semi structured -Thematic data analysis - Nvivo 7	-Providers recognized the sexual and reproductive rights of HIV-positive individuals, but struggled with the tension between supporting these rights and concerns about spreading infection. -Limited knowledge of safer conception methods constrained their ability to counsel and support clients in realizing fertility desires. -Providers believed that parenting alternatives that do not maintain biological and cultural linkage are unlikely to be acceptable options.	- The data analysis was described clearly and sufficiently rigorous and variety of data sources.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
53	Myer & Rabkin et al (2005)	To explore the integration of reproductive health services into MTCT-Plus programme.	HIV-positive.	Review study	Reproductive health services, MTCT-Plus programme emphasise access to contraception, condom use and secondary prevention of HIV, early and treatment of STIs, cervical cancer screening, safe abortion, safe pregnancy, PMTCT and their positive children, including engage men and women services together	-This was a general review article based on reproductive health services into MTCT-Plus programme.
54	Myer, Rebe & Morroni (2007)	-To investigate the delivery of reproductive health care services in an antiretroviral therapy (ART) programme.	N=227 consecutive women attending a hospital-based ART outpatient service who had been on ART for at least one month. -Setting, Cape Town, South Africa.	-Quantitative study -A cross-sectional survey -Semi-structured interview	-60% of the women were younger than 30 years and 75% were sexually active. -The use of both condoms (70%) and hormonal contraceptives (31%) decreased with age, while the prevalence of sterilization (13%) increased with age. - Few women knew about emergency contraception (EC) (7%) or termination of pregnancy (TOP) (13%). -One in 10 women had experienced verbal or physical abuse by an intimate partner since their HIV diagnosis. -More than 80% of women had discussed the use of condoms and other forms of contraception with a health care provider since their HIV diagnosis, but less than 5% had discussed EC or TOP, and no woman had discussed issues of partner violence.	-This is an integrative service research, design and method were appropriated and described. -The programme and the main finding were clearly described.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
55	Nakaie, N., Tuon, S., Nozaki, I., Yamaguchi, F., Sasaki, Y. & Kakimoto, K. (2014)	-To clarify family planning practices in Cambodia and determine predictors of risk of inconsistent condom use among women on ART.	N= 408 - Among women on ART -Setting, Cambodia.	-Quantitative study -A cross-sectional survey -Multiple logistic regression analysis	-Of 408 respondents, 40, 17 and 10 used the pill, IUD, and injection, while 193 used condoms. 374 were not planning to have a child. Among 238 sexually active women who were not planning to have a baby, 59 were exposed to the risk of unintended pregnancy. - <i>"seeking family planning information", awareness of mother-to-child transmission (MTCT)</i> and <i>"having a son"</i> were significant predictors of inconsistent condom use. -Another model that included all variables identified <i>"able to ask a partner to use condom at every sexual intercourse"</i> was the only predictor.	-Sample size=population? it was not clearly described. -Validity and reliability were not described. - Statistic analysis was appropriate to measure the level of variables. - The main finding was clearly described.
56	Nattabi, B., Li, J., Thompson, S.C., Orach, C.G. & Earnest, J. (2012)	-To explore the experiences of HIV-related stigma among PLHIV in post-conflict northern Uganda and to describe how stigma affected the desires of PLHIV to have children in the future.	N= 26 - 14 HIV-positive female and 12 HIV-positive male. -Setting: in Gulu district, northern, Uganda.	-Qualitative research -In-depth interview -Thematic data analysis was undertaken using NVivo8	-Conceptual Model of HIV/AIDS Stigma, PLHIV in northern Uganda continue to experience stigma in various forms, including internal stigma and verbal abuse from community members. While many PLHIV desire to have children and are strongly influenced by several factors including societal and cultural obligations, stigma and discrimination also affect this desire. - Several dimensions of stigma, such as types of stigma (received, internal and associated stigma), stigmatizing behaviours (abusing and desertion) and agents of stigmatization (families, communities and health systems), either directly, or indirectly, enhanced or reduced PLHIV's desire to have more children. -The social-cultural context within which PLHIV continue to desire to have children must be better understood by all health professionals who hope to	- The recruitment strategy was appropriate to the aims of the research. - The data analysis was sufficiently rigorous and described.

improve the quality of PLHIV's lives.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
57	Ngure & Heffron et al (2012)	-To assesses pregnancy incidence according to contraceptive method.	N= 3,354 -2269 HIV-1-seropositive and 1085-seronegative women from seven cites. -Setting: African countries.	-Quantitative research -Multivariate Andersen-Gill analysis.	-Compared with women using no contraceptive method, pregnancy incidence was significantly reduced among HIV-1-seropositive and HIV-1-seronegative women using injectable contraception. -Oral contraceptives significantly reduced pregnancy risk only among HIV-1-seropositive women but not seronegative women, and, for both seropositive and seronegative women, oral contraceptive pill users were more likely to become pregnant than injectable contraceptive users. -Condoms, when reported as being used as the primary contraceptive method, marginally reduced pregnancy incidence. -There were no pregnancies among women using intrauterine devices, implantable methods or who had undergone surgical sterilization, although these methods were used relatively infrequently.	-This is a secondary analysis on previous study. -Large sample size -Using participant's criteria to choose samples. -Tools validity and reliability were not described. -Statistic analysis was appropriate to measure the level of variables.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
58	Nóbrega & Oliveira et al (2007)	-To describe the reproductive desire of women with HIV/AIDS and to identify factors associated with the desire for motherhood.	N=220 - Women with HIV/AIDS. -Setting, In Brazil.	-Quantitative - A cross-sectional study -Multivariate regression analysis	-Forty-nine percent were using a contraceptive method, and 37% wished to undergo tubal ligation. -Sixty-four percent of the latter women were motivated by the fear of having an HIV-positive child. -Forty percent of the participants wanted to have a child. - the variables independently associated with women's desire to have a child were: younger age, number of children and partner's desire for a child. - Having a partner who did not know about the woman's HIV positive status was negatively associated with the woman's desire for a child.	-Sample size=population -Tools validity and reliability were not described. - Statistic analysis was appropriate to measure the level of variables. - The main findings were clearly described.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
59	Oosterhoff, P., Anh, N.T. & Hanh, N.T et al (2008)	-To study the factors influencing decisions about fertility in families with an HIV positive member.	N=373 -56 HIV-infected pregnant women, HIV-positive mothers. -42 their partners, family members. -275 health workers. -Setting, Hanoi and in Thai Nguyen City, two urban areas in Northern Vietnam.	-Mixed method -Qualitative and quantitative data -Semi-structure interview.	- Presented in 4 themes 1.Familial reproductive processes: The HIV-positive man's parents play a key role in encouraging him to have children which lead a stress to women and partner. 2. Individual desire to have a child: HIV-positive women and men may experience a lack of autonomy in issues of reproductive health of interest to the family. Women who have at least one male child less pressure women having none. 3. Few rights for the wife: A male child, especially the oldest grandson, secures a woman's position in the household of her in-laws and establishes good relationships between her biological family and her in laws. 4. Professionals' assumptions: Health workers knew families pressured women to have a child and they in turn feel pressured by their families. the whole family takes a crucial role in	-Multi sources of data. -The research design was appropriate to address the aims of the research.
60	Paxton, S et al. (2005)	- To understand of nature, pattern and extent of AIDS related discrimination in 4 Asian countries.	N = 764 - 302 HIV+ people in India. - 42 HIV+ people in Indonesia.	- Quantitative research - Questionnaire - Chi square	- 54% of samples experienced some form of discrimination with in health sector such as refusal of treatment (15%) or delay in provision of health care (17%). - Most of samples did not received pre-test counselling, 38% of samples in all countries received pre-test counselling.	-This study was conducted wide range of 4 countries in Asia. -Pilot study was used to revise tools. -Snow ball technique was used to recruit samples in qualitative method

- 338 HIV+ people in Thailand.
- 82 HIV+ people in Philippines.

-Breaches of confidentiality by health care workers were common, 34% of respondents said that somebody else had been told of their HIV status without their consent.
-One-third of samples said they were advised not to have children after diagnosis.
- Women were sig. more likely to experience discrimination than men in family, community and workplace.

rather than quantitative method.
-Population and sampling were not described.
-Validity and reliability were not described.
- Statistic analysis was appropriate to measure the level of variables.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
61	Ross et al. (2007)	- To examine the lived experiences of HIV+ pregnant women in Thailand.	N = 10 - Thai HIV positive pregnant women living with HIV/AIDS who were newly diagnosed. - Setting: 2 government ANC clinics, Thailand.	- Qualitative research - An interpretive phenomenology. - Van Manen's (1990) method of thematic analysis	- Theme is a "struggle" that described in their life after diagnosis. 4 sub-themes were emerged; 1. struggling alone 2. sharing one's struggling 3. struggling for the baby 4. struggling through ups and downs -These findings are similar to other previous studies across other groups of HIV+ women about hope and struggle. -All participants decided to no abortion because of against the Buddhist believe.	-The research design was appropriate to address the aims of the research as using phenomenology to describe lived experiences of HIV+ pregnant women. -The data analysis was sufficiently rigorous and described such as member checking.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
62	Ross et al. (2009)	<p>- To examine predictors of depressive symptoms among HIV+ pregnant women in Thailand.</p> <p>- Independent variables; self-esteem, emotional support, financial support and physical symptoms.</p> <p>- Dependent variable; Depressive symptoms.</p>	<p>N = 127</p> <p>-HIV+ pregnant women in Thailand.</p>	<p>-Quantitative research</p> <p>-Correlation</p> <p>- Cross-sectional</p> <p>- Convenience sampling</p>	<p>-Physical symptoms were positive correlation with depressive symptoms.</p> <p>- Self-esteem, emotional support, financial support were negatively correlation with depressive symptoms.</p>	<p>-Population frame was not described.</p> <p>-Convenient sampling was used.</p> <p>-Tools validity and reliability were clearly described.</p> <p>- Statistic analysis was appropriate to measure the level of variables.</p> <p>- The main findings were clearly described.</p>
63	Ross, R., Stidham, A.W. & Drew, B.L. (2012)	<p>-To examine predictors of HIV disclosure among perinatal Thai women.</p>	<p>N=207</p> <p>- Pregnant and postpartum women.</p> <p>-Setting, Thailand.</p>	<p>-Quantitative research</p> <p>- Logistic regression analysis</p>	<p>- 63% of these Thai women had disclosed their HIV status to someone.</p> <p>-The significant predictors of disclosure included older age, employment, and high family support.</p>	<p>-This study was analysed from 2 previous studies of the 1st author (Ross, 2009 and 2011).</p> <p>-Population frame was not described.</p> <p>-Number of samples was confused, in abstract was 207 but in context was 212 (127+85).</p> <p>-Tools validity and reliability were not indicated in this paper.</p> <p>- Statistic analysis was appropriate to measure the level of variables</p> <p>- The main finding were clearly described.</p>

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
64	Rujumba & Neema et al (2012)	-To explore pregnant HIV-positive and HIV-negative women's partner disclosure experiences and support needs.	N= 30 -15 HIV-positive and 15 HIV-negative pregnant women attending a follow up antenatal clinic (ANC). -In eastern Uganda.	-Qualitative study -In-depth interview -Nvivo 9 software	-Most of the HIV-positive women had not disclosed their HIV status to sexual partners for fear of abandonment, violence and accusation of bringing HIV infection into the family. -Most HIV-positive women deferred disclosure and requested health workers' support in disclosure. -While all HIV-negative women had disclosed their HIV status to their sexual partners but expressed need for support to convince their partners to also undergo HIV- testing. Women reported that their partners often assumed that they were equally HIV-negative and generally perceived HIV testing in the ANC as a preserve for women.	- The recruitment strategy was appropriate to the aims of the research to compare between 2 groups of women about HIV disclosure to their partners. However, rigour method was not described in the paper.
65	Rujumba & Neema et al (2013)	-To explore pregnant HIV positive and negative women's experiences of routine counselling and testing.	N=30 -15 HIV positive women. -15 HIV negative women. -Setting, in Mbale District, Eastern Uganda.	Qualitative study -In-depth interview -Nvivo 9 software	-Prior to attending their current ANC visit, most women knew that the hospital provided HIV counselling and testing services as part of antenatal care (ANC). HIV testing was perceived as compulsory for all women attending ANC at the hospital but beneficial, for mothers, especially those who test HIV positive and their unborn babies. -Most HIV positive women were satisfied with the immediate counselling they received from health workers, but identified the need to provide follow up counselling and support after the test, as areas for improvement. Most HIV negative women mentioned that they were given inadequate attention during post-test counselling. This left them with unanswered questions and, for some, doubts about the negative test results.	- The recruitment strategy was appropriate to the aims of the research to compare between 2 groups of women regarding to experience of HIV routine counselling. - Rigour method was not described in the paper.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
66	Sanders, Lorraine B (2008)	- To explore the meaning of pregnancy after diagnosis with HIV.	<p>N = 9</p> <p>- Women had been diagnosed with HIV and were currently pregnant or</p> <p>-Who had become mothers post-diagnosis.</p> <p>- 2 academic health centres in New York, USA.</p>	<p>- Qualitative research</p> <p>- Phenomenology</p> <p>-In-depth interview</p> <p>- Purposive sampling.</p> <p>-Giorgi's(1985) analysis method</p>	<p>- Women aged 34-53 years old</p> <p>- The meaning of experience of being a HIV+ women showed themes as follow;</p> <ol style="list-style-type: none"> 1. Extreme emotional distress after HIV diagnosis: all participants experienced emotional distress upon hearing the diagnosis and some had long term emotional effects. 2. Feeling stigma: Some of them related the experience of being stigmatized in health care setting, which evoked very negative feelings. 3. Emotions related to the pregnancy and the baby: they feared transmission to baby, worried about the safety of ARV and were anxious about effects of the pregnancy on their health. 4. Experiences with health care providers: they experienced both positive(supportive) and negative(treated less than a person) with their health providers. 5. Motherhood for women with a diagnosis of HIV: 7 of total participants had lost parental rights either temporarily or permanently because of drug addiction but they need to have a second chance to be good. 	<p>-There was few quite fewer number of participants (N=9), this might from a short period of data collection just 3 months (June-August, 2006).</p> <p>-The participants in the study had older age (34-53 years), there is unusual seen in other papers which women's reproductive age would fine usual 18-39 years old.</p>

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
67	Sanders,L.B. (2009)	- To describe the behaviours and practices of women infected with HIV in relation to sex and pregnancy.	N=9 -Women 34-53 years old - Women had been diagnosed with HIV and were currently pregnant or -Who had become mothers post-diagnosis. - 2 academic health centre in New York, USA.	- 2 nd analysis of qualitative data previously (of Sanders, 2008) -Thematic analysis	- 3 themes; 1. Issues of disclosure of HIV status -decisions about disclosure and timing of disclosure were complex and often based on assumption that a sexual relationship was going to develop long-term. -a complex mixture of emotion including fear, stigmatization and denial precluded her ability to disclose, although lamented that the person who infected her did not disclose his status before becoming intimate. 2. Safe sex and shifting responsibility - some of them were vigilant about condom use in beginning of relationship. -women reported that as time passes, more risk were taken and practice of consistency condom use decreased. 3. Desiring pregnancy and concern about of the risk of transmission - all of them desire to have children but want to protect their husband from transmission, some of them thought that IVF is one of choices.	-According to this paper is the secondary study which the authors had analysed on Sanders, 2008). Just 9 participant were recruited with a short time of data collection (3 months, June-August, 2006). The length time of data collection should be extended to cover more samples.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
68	Smee & Shetty et al (2011)	To examine the predictors of repeat pregnancy among women from PMTCT programme.	N=159 - 79 HIV+ Women and 80 HIV negative women. -Setting, Zimbabwe.	-Quantitative research; cross-sectional study - Independent variable= socio-economic status, age, fertility attitudes score and previous pregnancy outcomes -Dependent variable= repeat pregnancy -Analysis; logistic regression.	- Factors that associated with an increased likelihood of repeat pregnancy were death of a child, miscarriage AND each additional child. Decreased likelihood of repeat pregnancy was associated with decreased rank order of living conditions, age and higher Fertility Attitude Score.	-Population frame and sample size and sampling were described. -Tools validity and reliability were clearly described. - Statistic analysis was appropriate to measure the level of variables - The main findings were clearly described.
69	Snow, R.C., Mutumba, M., Resnicow, K. & Mugenyi, G. 2013	- To investigate the impact of HIV status on fertility desires in Uganda.	N = 1,594 -Women aged 18 to 49 years visiting outpatient services at Mbarara Regional Hospita, Uganda.	-Quantitative research -Logistic regression models	-Of 1,594, 59.7% were HIV-positive; 96.4% of HIV-positive women were using antiretroviral therapy (ART). -The relationships between HIV status and fertility desires, marital status, household structure, educational attainment, and household income -Among married women, HIV-positive status was significantly associated with a lower likelihood of desiring more children (27.7% vs 56.4% of HIV-negative women; P < .001). -The difference remained highly significant net of age, parity, son parity, foster children, education,	-Large sample size. -Using participant's criteria to choose samples but population and sampling were not described. -Validity was described. - Statistic analysis was appropriate to measure the level of variables.

70	Stringer & Giganti et al (2009)	-To compare the incidence of HIV disease progression among antiretroviral therapy- women with and without exposure to hormonal contraception.	N= 4109 - 3064 women reported using non-hormonal method, 823 reported using implants/injectable and 222 (5%) reported using oral contraceptive pills. -13 sites in Africa and Asia.	-Quantitative study -Cohort study	or household income. -HIV-positive women were more likely to be poor, unmarried, single heads of household, in second marriages (if married), living with an HIV-positive spouse, and supporting foster children. -Found a strong association between positive HIV status and lower fertility aspirations among married women in Uganda, irrespective of ART status. -At baseline, 3064 (75%) women reported using either no contraception or a non-hormonal method, whereas 823 (20%) reported using implants/injectable and 222 (5%) reported using oral contraceptive pills. -The disease progression outcome was met by 944 (29%) women (rate, 18.3/100 woman-years). -Neither implants/injectable (adjusted hazard ratio 1.0, 95% confidence interval 0.8-1.1) nor oral contraceptive pills (adjusted hazard ratio 0.8, 95% confidence interval 0.6-1.1) were associated with disease progression. -Treating contraceptive method as a time-varying exposure did not change this negative finding. -Some reassurance that hormonal contraception is not associated with HIV disease progression.	-Large sites and sample sizes. . Using participant's criteria to choose samples but population and sampling were not described. -Validity and reliability were not described. - Statistic analysis was appropriate to measure the level of variables and addressed to the research questions and hypothesis.
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NO.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
71	Suryavanshi, N et al. (2008)	- To understand the factors influencing repeat pregnancies in women with known HIV status in India.	N = 190 - Group A= 63 HIV+ repeat pregnant women -Group B= 64 HIV- repeat pregnant women. -Group C= 63 HIV+ non pregnant women - In India.	- Quantitative study -3 Cohorts study - Purposive selected. - Chi square - Simple logistic regression -Fisher's exact test -t-test -Odds ratios	In Indian context, there are two important factors known to influence reproductive decision making; 1. Family pressure (primarily from in-laws of the women), defined by the desire of husband. 2. The desire to have at least one male child.	-Using participant's criteria to choose samples. -Time to follow the repeating pregnancy was 9-12 months, women who had repeated longer than this period would be excluded. -Validity and reliability were not described. - Statistic analysis was appropriate to measure the level of variables.
72	Thurling & Candice (2012)	-To investigate the training of lay counsellors by analysing their training curricula and interviewing lay counsellors about their perceptions of their training in their role of PMTCT.	N=9 - Counsellors in PMTCT. -Setting, South Africa.	- Qualitative, descriptive and contextual in design -In-depth interview	-The curricula analysed had different styles of delivery, and the approaches to learning and courses varied, resulting in inconsistent training outcomes. A need for supervision and mentorship in the working environment was also noted. The training of lay counsellors needs to be adapted to meet the extended roles that they are playing in PMTCT.	-Using triangulation to recheck data.

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73	Treisman, Jones & Shaw (2014)	-To explore how women perceive, make senses of, and manage a diagnosis of HIV during pregnancy and after delivery.	N=12 -African women with HIV positive -Setting in London.	- Qualitative research -In-depth interview -Semi-structured interviews -Phenomenological analysis - Interpretive Phenomenological Analysis.	4 core themes 1) HIV as part of wider tapestry. 2) Community and systemic influences and responses to HIV, including stigma and discrimination. 3) Experiencing a different story of HIV. 4) Mother-child relationship.	- The research design was appropriate to address the aims of the research.
74	Tyer-Viola (2007)	-To define attitudes toward pregnant women with HIV and how these attitudes correlate with and affect prejudice and nursing care intentions.	N=350 - Obstetric nurses. -Setting, In USA.	-Quantitative -Mailed surveys	-Obstetric nurses had more positive Mothering-Choice attitudes than Sympathy-Rights attitudes ($p = .000$). -Nurses who knew more than four people affected by HIV/AIDS had more positive attitudes ($p \leq .05$). -Nurses with more positive attitudes were less prejudiced and more willing to care for pregnant women with HIV ($p = .05$). -Nurses were significantly more prejudiced and less willing to care for women with than without HIV.	-Population frame and sample size and sampling were clearly described. - 44% of population frame responded to mails -Tools validity and reliability were clearly described. - Statistic analysis was appropriate to measure the level of variables. - The main findings were clearly described.

NO.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
75	Vescovi, G. et al. (2014)	-To identify protective factors of the experience of pregnancy and motherhood among young mothers living with HIV.	N = 3 - Three young mothers (ages 17-19) whose babies were 4-6 months. - In Brazil.	- Mixed method	-The protective factors were identified; positive feeling about motherhood, positive assessment of received care and couple relationships, disclosure of HIV diagnosis to family members, family support and accountability for infant care. - The protective factors in 3 participants had similarities and differences.	-It should be a case study or case report rather a mixed-method because the design and method including sample size just 3 cases. -Report of finding was a case study presentation rather than a mixed-method.
76	Viana, R.B & Campos, F.H et al. (2013)	-To describe the experience of pregnant women with HIV+ and nursing care received in prenatal under the perspective of the mother.	N=8 -8 women HIV positive -Setting, In Brazil.	-Qualitative approach descriptive -Semi-structured interview - Content analysis	There are two categories "unveil it takes" and "Doom character (lack of) care." -The role of the nurse, through the view of women, not evidenced during the prenatal period, in the puerperium this role was confused with the action of other nursing professionals and sometimes women resented of not receiving a more specialized nursing care.	- Authors do not explain how rigor was maintained in the study i.e member checks, reflexivity.
77	Visser & Neufeld et al (2008)	To explore recently diagnosed HIV-positive pregnant women's reasons for disclosure and non-disclosure of sero-status.	N=293 -HIV-positive pregnant women in South Africa.	-Qualitative study -Content analysis	-Women weighed fear of abandonment and discrimination against their desire to raise risk awareness and their need for support. -Partners most often responded to disclosure with disbelief and shock, whereas parents frequently exhibited emotional distress, but were still supportive, as were other relatives and friends. -The women subsequently experienced low levels of adverse consequences after disclosure.	-Number of participant were large for qualitative interview method, the strategies to obtain and manage data were not indicated. - The rigorous of study was not described.

NO.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
78	Wall, K.M., Tichacek, A., Allen, S., Haddad, L., Vwalika, B., Htee Khu, N., Brill, I., Kilembe, W., Stephenson, R., Chomba, E. & Vwalika, C. (2013)	To describe rates of unintended pregnancy among HIV positive couples and also identify factors associated with unintended pregnancy among oral contraceptive pill (OCP) using couples in this cohort.	N= 1,060 couples - HIV positive couples -Setting, in Lusaka, Zambia.	-Quantitative research -Multivariate Cox modelling.	The highest rates of unintended pregnancy were observed among couples requesting condoms only (26.4/100CY) or OCPs (20.7/100CY); these rates were not significantly different. OCP users accounted for 37% of the couple-years (CY) observed and 87% of unintended pregnancies. Rates of unintended pregnancy for injectable (0.7/100CY) and intrauterine device (1.6/100CY) users were significantly lower relative to condom only users. No pregnancies occurred among contraceptive implant users or after tubal ligation. Factors associated ($p < 0.05$) with time to unintended pregnancy among OCP users in multivariate analysis included the man wanting more children, the woman being HIV negative versus having stage IV HIV disease, and the woman reporting: younger age, no previous OCP use, missed OCPs, or sex without a condom.	-Population frame, sample size and sampling strategy were clearly described. -Tools validity and reliability were not described. - Statistic analysis was appropriate to measure the level of variables. - The main findings were clearly described.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
79	Youngwanichsetha, S. et al. (2010)	- To explore the decision making process that women have to concerning their pregnancies in Thailand.	<p>N = 38</p> <p>- Age = 17-39 years.</p> <p>- Para = 0- multi</p> <p>- Diagnosis HIV+</p> <p>- 8 cases diagnosed before pregnancy</p> <p>-30 cases diagnosed after pregnancy</p> <p>- Setting: 2 tertiary hospitals in southern, Thailand.</p>	<p>- Qualitative research</p> <p>- Grounded theory</p> <p>-Constant comparative analysis.</p> <p>-Coding and memos</p> <p>-Category and subcategories</p>	<p>- A model of decision making; the core category is “Weighing stress” divided into 3 sub-categories</p> <p>1. Being ambivalent about continuing pregnancy.</p> <p>1.1 being concerned over M-C-T</p> <p>1.2 considering the desire to have a child</p> <p>1.3 Preferring to keep the child</p> <p>1.4 considering an abortion</p> <p>2. Exploring alternative options</p> <p>2.1 seeking information, services and emotional support.</p> <p>2.2 discussing concerns and decision making with health providers, husbands and family members.</p> <p>2.3 trying to seek an abortion</p> <p>2.4 considering the use of ARV</p> <p>2.5 offering the child for adoption</p> <p>3. Selecting the appropriate choice</p> <p>3.1 appraising the influencing factors</p> <p>3.2 deciding between continuing the pregnancy and terminating the pregnancy</p> <p>3.3 adapting the mind to the decision.</p>	-The research design appropriate to address the aims of the research as using grounded theory.

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
80	Zaba et al (2013)	To estimate the excess mortality associated with HIV during pregnancy and the post-partum period in sub-Saharan Africa.	N= 138,074 - Population-based HIV/AIDS data on Africa (ALPHA) -Setting, Sub-Saharan Africa.	Longitudinal study	<p>-138,074 women aged 15-49 years contributed 636,213 person-years of observation.</p> <p>-49,568 women had 86,963 pregnancies, 6,760 of these women died, 235 of them during pregnancy or the post-partum period.</p> <p>-Mean prevalence of HIV infection across all person-years in the pooled data was 17.2% but 60 of 118 (50.8%) of the women of known HIV status who died during pregnancy or post-partum were HIV infected.</p> <p>-The mortality rate ratio of HIV-infected to HIV-uninfected women was 20 in women who were not pregnant or post-partum and 8.2 in pregnant or post-partum women.</p> <p>-Excess mortality attributable to HIV was 51.8 per 1000 person-years in women who were not pregnant or post-partum and 11.8 per 1000 person-years in pregnant or post-partum women.</p> <p>- HIV-infected pregnant or post-partum women had around eight times higher mortality than did their HIV-uninfected counterparts.</p> <p>- Predict that roughly 24% of deaths in pregnant or post-partum women are attributable to HIV in sub-Saharan Africa.</p>	<p>-Large sites and sample sizes.</p> <p>-Using participant's criteria to choose samples but population and sampling were not described.</p> <p>-Validity and reliability were not described.</p> <p>- Statistic analysis was appropriate to measure the level of variables and addressed to the research questions.</p>

No.	Authors	Objective of study	Samples/participants	Methodology/method	Key Findings	Strengths/ limitations
81	Zhang, Y., Loutfy, M.R., Margolese, S., Yudin, M.H., Raboud, J.M., Diong, C., Hart, T.A., Shapiro, H.M., Librach, C. & Gysler, M. 2012	-To assess the desire, need, perceptions, and knowledge of assisted reproductive technologies (ARTs) for women living with HIV (WLWHIV) and determine correlates of ART knowledge desire.	N= 500 - Women living with HIV -Setting, in Ontario, Canada.	-Quantitative research	<p>-88% of cohort study were previously pregnant, 78% desired more information regarding ART, 59% were open to the idea of receiving ART, 39% felt they could access a sperm bank, and 17% had difficulties conceiving (self-reported).</p> <p>-Age, African ethnicity, and residence in an urban centre were correlated with desire for more ART information.</p> <p>-50% of participants, wanted to speak to an obstetrician/gynaecologist regarding pregnancy planning, and 74% regarded physicians as a main source of fertility service information.</p> <p>-While the majority of participants in this cohort desire access to ART information, most do not perceive these services as readily accessible.</p>	<p>-Using participant's criteria to choose samples but population and sampling were not described.</p> <p>-Validity was described.</p> <p>- Statistic analysis was appropriate to measure the level of variables.</p> <p>- The main findings were clearly described.</p>

