

Sexual behaviour and practices among adolescent blood donors in Harare and
Masvingo provinces, Zimbabwe

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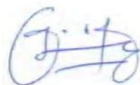
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Attestation of authorship

"I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning"

Signature



Date__4/11/2014_____

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I attained my bachelor's degree in 2006 after an energy-sapping and traumatic ordeal that demanded perseverance, hard work and tenacity on my part. By contrast, my studies at masters' level were enjoyable and fulfilling because of the support I got from the New Zealand government.

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Abstract

The incidence of HIV infection is increasing among Zimbabwean adolescent blood donors. Since this group contributes around 70% of total blood collections, the increase may pose future public health challenges such as lack of adequate and safe blood. Previous research on this group observed a positive association between history of sexually transmitted infections (STIs) and HIV. However, previous study designs suffered from both a dearth of data on sexual behaviour and their inability to provide a platform for adolescent blood donors to discuss the factors which may impact on their ability to protect themselves against HIV. This study sought to describe sexual behaviour and practices among adolescent blood donors as well as the contextual factors shaping such behaviour. In this qualitative study, 10 adolescent participants and four key informants were purposively selected. Semi-structured interviews were carried out in 2013 in both Harare and Masvingo, Zimbabwe. Data were categorised both manually and using the *NVivo* software before thematic analysis was undertaken. All except one adolescent participant were regular donors. The number of previous donations given ranged from one to nineteen. Key informants had between two and 27 years' experience of working in HIV-related clinical and counselling services. The majority (n=7) of adolescent blood donors were practising sexual abstinence. Social status of being blood donors, together with the knowledge that all donated blood is tested for HIV were protective against risky sexual behaviour. However, socio-economic and cultural factors were reported to override this protective effect. Half the number of adolescent participants reported acceptability of unprotected sex if they had sex with other blood donors, as they perceived a low risk of HIV infection in these individuals. Contextual factors; including gender and age imbalances, economic deprivation, partying, pressure for sex on female students from some male lecturers who promise them good grades, inaccessibility of condoms and lack of practical skills on condom use may put adolescent donors at risk of HIV. Socio-economic and cultural factors make it difficult for adolescent donors to make safe behaviour choices. This suggests that behavioural change models (ABC model), are unlikely to be effective in reducing HIV incidence in this group. Ensuring financial security, especially among female adolescents, acknowledging adolescents as sexually active beings and making them aware of the risk of other STIs which may be prevented by using condoms are likely to have an impact in ensuring a safe and consistent pool of adolescent blood donors in Zimbabwe.

Key words: *Adolescent blood donor, sexual behaviour, HIV, ABC model, Zimbabwe.*

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Dedication

To my son Michael Chabōd Tinotendaishe

Chapter 1: Introduction

Availability of adequate and safe blood is a public health interest. Patients do not want to contract blood-borne infections from the very units of blood meant to save their lives. For this reason, blood and/or its products are infused into recipients only as a last resort. However, it is inevitable for most patients to end up getting a blood infusion, especially in Zimbabwe. This is because the rate of transfusion is high owing to road traffic accidents, pregnancy complications, anaemia and surgery, to mention just a few. In a context where the national prevalence of Human Immuno-deficiency Virus (HIV) infection remains high around 15% (Zimbabwe National Statistics Agency [ZIMSTAT] & Macro Inc., 2011), ensuring blood safety is vital in order to avert either new HIV infections or re-infections, for those already infected.

In Zimbabwe, blood safety is hinged on both the use of contemporary testing technologies and stringent blood donor selection. However, the safety of blood is still under threat due to the continued burden of blood-borne infections such as HIV, syphilis, hepatitis B and C viruses. To this end, the National Blood Service Zimbabwe (NBSZ) recruits blood donors from population groups that have a low risk profile for HIV infection. Adolescent blood donors are one such a group. The World Health Organisation (2003) defines adolescence as the period between the ages 10-19 years. In this study, adolescent blood donors are those donors between 16-20 years inclusive. They have long been considered to have a low risk of sexually transmitted infections (STIs) such as HIV and syphilis (Mandisodza et al., 2006). However, recent annual reports from the NBSZ showed that the incidence of HIV infection, which is the number of new cases of HIV infection, is increasing among this blood donor category (NBSZ, 2008; 2011). Ironically, the increase coincides with a decrease in the overall incidence of HIV infection (NBSZ, 2010). This creates a paradox with regards to the possible cause of incident HIV in this group.

There are fears that the burden of HIV among adolescent blood donors may negatively affect their altruistic values. Since this group contributes at least 70% of total blood collections in Zimbabwe (National Blood Service Zimbabwe, 2010), loss of altruistic values may be a prelude to a dwindling of the blood donor pool. This may reduce both the quantity and safety of future blood supplies. Already the National Blood Service Zimbabwe experiences acute seasonal blood shortages during school holidays—an indication of the immense contribution by this group.

The National Blood Service Zimbabwe's executive management, Medical Scientific Committee and other researchers alike are interested in identifying risk factors for incident HIV infection among adolescent blood donors. Early studies aimed at exploring HIV incidence among blood donors in Zimbabwe tended to focus on blood donors in general. This possibly masked HIV incidence among adolescent donors. In more recent years, studies (e.g. Mandisodza et al., 2006; Mandisodza, Muringami, Musekiwa, Mvere, & Abayomi, 2005) shifted their focus towards adolescent blood donors. However, these studies targeted demographic and social variables as explanatory variables for incident HIV infection. Factors identified as positively associated with incident HIV infection were living in high density suburbs, female gender, being a new blood donor and history of STIs. History of STIs underlies risky sexual behaviour among blood donors. However, no additional study was done to explore this variable in both depth and breadth.

One of the most significant events of the early 2000s was the first attempt to estimate sexual behaviour among regular blood donors in Zimbabwe. Gwanzura et al. (2002) observed a high prevalence (7.4%, n=22/299) of herpes simplex virus type 2 (HSV-2) which was positively associated with blood donor age. Herpes simplex virus-2 is an STI which is not routinely screened for in donated blood; however, it is a biomarker for risky sexual behaviour such as unprotected sex. Moreover, it causes genital ulcerations, thereby increasing chances for HIV acquisition. A high prevalence of HSV-2 is an interesting finding: it also exposes possible non-disclosure of previous and current risky sexual behaviour by blood donors. All blood donors participate in a pre-donation screening interview in which they answer questions aimed at identifying risk factors for transfusion transmitted infections. However, some may not disclose their previous or current risky sexual behaviour on grounds they may be stopped from giving blood. Thus, non-disclosure of risky sexual behaviour may be attributed to pressure to donate and/or bias in responses given by potential donors during the pre-donation screening interview. As a corollary, blood donors with either latent or sub-clinical STIs may continue to give blood, thereby posing a health risk to the recipients. There is a convergence of findings between high prevalence of HSV-2 and history of STIs.

It is becoming increasingly difficult to ignore the possible association between risky sexual behaviour and incident HIV infection among adolescent blood donors. This is plausible since Zimbabwe lies within a geographical context in which unprotected heterosexual intercourse accounts for 85-90% of the infection (Simon, Ho, & Abdool-

Karim, 2006). Already the decline in the national HIV prevalence from 31% in 1991 to the current 15% is hugely attributed to changes in sexual behaviour especially among young people (National AIDS Council, 2006; Zimbabwe National Statistics Agency & Macro. Inc, 2011). The need to shift research focus towards sexual behaviour as a possible explanatory variable for incident HIV infection among adolescent blood donors cannot be over emphasised.

One can argue that risk factors for incident HIV are multi-factorial. For example, it is not yet clear whether sexual behaviour alone could explain much of the observed increase in incidence. Moreover, it is not clear which type of sexual behaviour is common and poses risk of HIV among adolescent blood donors. Risky sexual behaviours are those which increase chances of either contracting or transmitting STIs. They include unprotected vaginal, anal or oral sex; changing sexual partners frequently and having multiple sexual partners. It seems sexual behaviour could help explain much of the observed incidence of HIV infection since it is a proximal factor. However, questions may be raised about whether contextual factors have an impact on sexual behaviour.

So far little attention has been paid to sexual behaviour among adolescent blood donors. Little research on this group tended to focus on background and demographic factors at the expense of sexual behaviour—a proximal factor. Moreover, previous studies focussed on isolated variables, making it difficult to identify the interplay between both contextual and individual factors as well as their impact on incident HIV infection. Such information may be crucial in developing targeted interventions. For example, female gender does not predispose one to HIV infection unless there is a certain risky sexual behaviour. As a corollary, it is still difficult to pinpoint the major risk factors for incident HIV infection.

It was interesting to note that although McFarland, Mvere, Shamu and Katzenstein (1998) observed a positive association between the history of STIs and incident HIV, no further work was done to capitalise on this promising finding. Instead, there was considerable emphasis on demographic and social variables and estimation of HIV incidence. This may have clouded focus on sexual behaviour. Moreover, previous research may have suffered from a dearth of data on sexual behaviour among adolescent blood donors.

Insufficient data could be attributed to two reasons. Firstly, most of the studies on blood donors (e.g. Mandisodza et al., 2006) were retrospective and utilised data in the NBSZ blood donor database. It is highly likely that such studies were limited by the kind of data available in the database. For example, blood donors provide data on their demographic and social variables. Data on sexual behaviour such as condom use, sexual debut, to mention just two, are not stored in the database. Consequently, previous research was only as good as the data that were at the researchers' disposal.

Secondly, it is important to note that lack of data was not a sufficient impediment. Previous studies could have easily circumvented this through use of an alternative research methodology. Thus, the inertia by research to move away from identifying socio-demographic variables towards exploring sexual behaviour could partly be attributed to the retrospective cross-sectional designs used in previous research. Such designs made it almost impossible to explore sexual behaviour in depth.

In this study I seek to build on the findings by Gwanzura et al. I set out to push the boundaries of research and resolve the current knowledge gap on sexual behaviour among adolescent blood donors. I am going to employ a different research methodology which will make it feasible to identify sexual behaviour, contextual factors that shape and propagate such behaviour, as well as the linkages that may exist between the two. To this end, I am going to use a hybrid of two theoretical models as the social lens to look into sexual behaviour and practices among adolescent blood donors. This study seeks to address the following research questions and objectives.

Research question(s)

- What are the sexual behaviours and practices among adolescent blood donors in Harare and Masvingo provinces, Zimbabwe?
- What are the contextual factors that shape and propagate such behaviour?

Objectives

- To describe sexual behaviours and practices among adolescent blood donors
- To identify the contextual factors that may be shaping such behaviour and practices
- To provide a basis for focussing future quantitative research on sexual behaviour among adolescent blood donors.

1.1 Background about Zimbabwe

I start by giving a background of Zimbabwe which describes the context in which adolescent blood donors live and grow. This background covers the events that unfolded during the early 1990s, before the introduction of life saving antiretroviral drugs.

Zimbabwe is a developing country located in southern Africa. She shares borders with four countries: South Africa, Botswana, Zambia and Mozambique. The country is divided into 10 provinces and 62 administrative districts (World Health Organisation, 2011). There are two main ethnic groups: Shona and Ndebele. These account for 80% and 15% of the population respectively (Sambisa, Curtis, & Shannon-Stokes, 2010). The remaining 5% is accounted for by the following population groups: Chinese, Europeans, Indians and Venda. About 43% of the 12.5 million people in Zimbabwe is below 15 years of age (WHO, 2011; Zimbabwe National Statistics Agency & Macro. Inc, 2011).

Poverty and economic hardships are no strangers to Zimbabwe. The latter can be traced to the early 1990s when both the International Monetary Fund (IMF) and the World Bank (WB) introduced structural adjustment programmes. In 1991, the Government of Zimbabwe, in a bid to improve key sectors of the economy such as agriculture and mining, borrowed some money from the IMF (Riddell, 1992). As part of the IMF/WB pre-conditions to get loans, Zimbabwe, just like any other loan recipient, had to devalue her currency and liberalise trade, just to mention two of the conditions (Green & Labonte, 2008; Kawachi & Wamala, 2007).

Barely a year after borrowing the funds, Zimbabwe experienced one of its worst droughts. According to Ojo and Ajayi (1997), it became difficult for the government of Zimbabwe to maintain fiscal discipline in the presence of this external shock. Meanwhile, trade liberalisation had paved a way for an influx of cheap and mass-produced foreign commodities which undercut local products. As local production of goods was suppressed, local industries collapsed and consequently, the corporate tax base dwindled. The result was less revenue for the government to service its debt.

Interest payments to IMF/WB became a huge burden for a government that was reeling from the effects of a major natural disaster. Interest rates which were initially around 23% of recurrent expenditure in the 1993/94 fiscal year, rose to 25% in the successive fiscal year (Ojo & Ajayi, 1997). This coincided with high inflation of around 40% in 1992. As a result, the government of Zimbabwe was forced to cut subsidies on critical

social services such as health and education. Many adolescents were forced out of schools when their parents failed to pay school fees. Young girls may have borne the brunt of gender inequalities. Stiglitz, the former Chief Economist for the World Bank, summed up the devastating effects of structural adjustment programmes as follows:

For the peasants in developing countries who toil to pay off their countries' IMF debts or businessmen who suffer from higher value-added taxes upon the insistence of IMF, the current system run by the IMF is one of taxation without representation. Disillusion with the IMF grows as the poor in Indonesia, Morocco, or Papua New Guinea have fuel and food subsidies cut, as those in Thailand see AIDS increase as a result of IMF-forced cutbacks in health expenditures, and as families in many developing countries, having to pay for their children's education under so-called cost recovery programs, make the most painful choice not to send their daughters to school (Stiglitz, 2002, p. 20).

Levels of unemployment increased due to a host of economic challenges. Drought destroyed all agro-based industries while an influx of cheap foreign imports led to closure of other industries. This meant reduced employment opportunities. In 1992, the rate of unemployment was 22% and by 1996, the figure had soared to 35% (Ojo & Ajayi, 1997). For women, who were mostly school drop-outs, the prospects for landing high paying jobs in a highly competitive environment were comparatively lower than those for their male counterparts. Economic difficulties forced many women into commercial sex in order to earn a living (NAC, 2006). This might have fuelled the spread of STIs such as herpes simplex virus type 2. This infection is known to cause genital ulcerations which increase the chances of contracting HIV infection. This period coincided with the introduction of hospital user fees which reduced both the uptake and utilisation of healthcare services.

The turn of the new millennium saw Zimbabwe suffering from the worst economic challenges in modern history. By July 2007, inflation figures stood at more than 231 million percent (WHO, 2011). This was exacerbated by the 2008/09 intensification of political instabilities stemming from the country's two rival political camps led by Mugabe and Tsvangirai. The result was disruption of the school calendars, closure of industries and an unemployment rate of more than 75% (World Health Organisation, 2011), internal displacement, and a mass exodus of skilled personnel to regional or overseas countries. Population hyper-mobility has been shown to increase the probability of HIV acquisition (Simon et al., 2006). Children were left in the custody of

extended families. Their parents became a source of livelihood for the families that assumed this caring role. However, population mobility may have disrupted the family composition and hence the way these children were brought up. The custodians were powerless to discipline these children. From my personal knowledge, parental love became "commodified" as some children were "spoiled" with foreign currency which may have been used by young men to buy drugs and to lure women.

A lot of adults died of HIV/AIDS because of lack of life prolonging antiretroviral drugs (ARVs)—leaving about 1.3 million orphans either in the care of the extended families or in child headed families in Zimbabwe (National AIDS Council, 2009). Without ARVs to keep the viral load (number of viral particles per litre of blood) at negligible levels, the risk of HIV transmission through blood and sexual fluids is high. Moreover, mother to child transmission of HIV infection may have been a major avenue for HIV transmission from HIV positive women to their babies during the early 1990s. Even the discovery of ARVs in 1996 did not benefit Zimbabweans since ARV patents meant that the price of the drugs was prohibitively high (Havlir & Hammer, 2005). Hitherto, the risk of mother to child transmission of HIV infection cannot be ruled out since ARV coverage is around 77% (WHO, 2012). Studies have shown that some newborn babies who acquire "slow progressing" HIV infection from their mothers may survive to adolescence without showing any signs of the infection (Hallett et al., 2007). Currently, the cohort of adolescents aged 16-20 was born between the years 1993-1997. These adolescents may not have risk factors for HIV infection asked for during the pre-donation screening process. As a result, they may enter the blood donor pool as new blood donors. This has negative implications on blood safety and adequacy.

1.1.1 Measures taken to reduce HIV infection in Zimbabwe

In 2002, HIV was declared a national emergency in Zimbabwe (NAC, 2006). In the following year, the Government of Zimbabwe launched the National HIV/AIDS policy for Zimbabwe (NAC, 2006; Ojikutu, Jack, & Ramjee, 2007). The policy is hinged on both HIV treatment and prevention. Among HIV prevention efforts, the strategies were aimed at promoting sexual behaviour change through the ABC model which advocates for abstinence, being faithful to one trusted partner and condom use in irregular relationships. The other strategy was to guarantee the safety of blood.

Blood safety is a critical area which could significantly reduce new HIV infections. The national blood policy was crafted to provide the NBSZ with both the legal framework

and the sole responsibility to collect, test, process and distribute blood and its products to all those in need, regardless of ethnicity, gender, and religious or political affiliation (Ministry of Health and Child Care Zimbabwe, 2010). Safety of blood was guaranteed through the use of contemporary testing technologies that meet international quality standards. However, Henry and Hubbel (1980) argue that despite advances in medical laboratory technology aimed at detecting transfusion transmissible infections such as hepatitis B virus and HIV in donated blood, a small number of these pathogens can escape laboratory detection systems to infect the patient. Hitherto, diagnostic equipment is not 100% specific—cannot detect all HIV negative blood donations. Thus, in a bid to further guarantee the safety of blood, the policy strategies are hinged on stringent donor selection criteria to exclude potential blood donors who are likely to give HIV positive blood. This is ensured through careful donor selection from low risk populations such as voluntary non-remunerated blood donors. These are blood donors who, unlike paid blood donors, give blood out of altruistic values, and are considered to be likely to disclose risk factors for HIV infection. Important in the group of voluntary blood donors are adolescent blood donors between 16-20 years.

1.1.2 Adolescent form the core of blood donors in Zimbabwe

Adolescents contribute the bulk of blood donations in Africa (Tagny, Owusu-Ofori, Mbanya, & Deneys, 2010). In Zimbabwe, most of adolescent blood donors attend school and contribute at least 70% of total blood collections (NBSZ, 2010). This group is relied on for two main reasons. Firstly, most adolescents are not yet sexually active, and are considered to have a low-risk of HIV infection. Secondly, most of them attend school, making it easy for the NBSZ to mobilise and recruit them, especially during school terms. The NBSZ normally experiences seasonal blood shortages during the school holidays. This is attributed to both a low supply of blood donors and an increase in demand for blood as a result of road accidents which occur during public holidays.

To curb blood shortages during school holidays, the National Blood Service Zimbabwe introduced the "Pledge 25 Club" in 1994 whereby young blood donors, from 16 years onwards pledge to give at least 25 donations in their lifetime (Mvere, 2002). Sixteen years is the entry point for most adolescents into the blood donor pool. Their continued active role as blood donors depends on their commitment to saving lives and/or on whether their blood continues to be safe from transfusion transmissible infections.

Safety of blood remains a critical challenge especially in sub-Saharan Africa. The region is still burdened by HIV infection and other STIs which are transmissible via blood. For example, the region is home to only 12% of the global population, yet it accounts for about 68% (22.5 million) of the 34 million people living with HIV/AIDS globally. Furthermore, the Joint United Nations Programme on HIV/AIDS [UNAIDS], (2011a) reported that in 2010, sub Saharan Africa accounted for 70% of the global new HIV infections. The highest prevalence of HIV infection was recorded among the 10 Southern African countries such as Zimbabwe, South Africa, Botswana and Zambia. Geographically, Zimbabwe is at the centre of the HIV pandemic (Simon et al., 2006).

The incidence of HIV infection in Zimbabwean adolescent blood donors is increasing. It doubled between 2007 and 2011 inclusive (NBSZ, 2008; 2011). This information is shown in Figure 1 below.

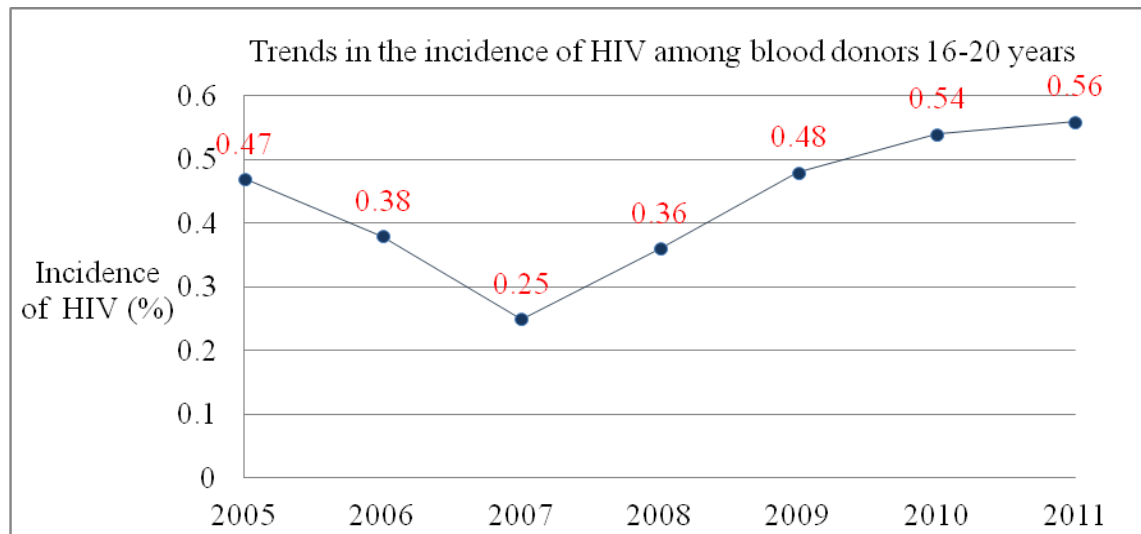


Figure 1: Incidence of HIV among adolescent blood donors

Adapted from NBSZ (2007; 2008; 2011).

1.2 Epidemiology of HIV in Zimbabwe

The major avenues for HIV transmission in Zimbabwe are: unprotected hetero-sexual contact which accounts for 85-90% of infections, mother to child transmission (10-15%) and HIV contaminated blood transfusion (1%) (National AIDS Council, 2006; Simon et al., 2006). However, we cannot rule out the possibility of HIV transmission in men who have sex with men. It is difficult to reach out to these groups and to get accurate data since homosexuality is criminalised in Zimbabwe.

The decline in HIV prevalence from 31% during the late 1990s to less than 18% was attributed to changes in sexual behaviour, especially among young people (NAC, 2006). There were reports of delays in sexual debut, decreased number of sexual partners and increased condom use. Nevertheless, the decline in national HIV prevalence could also be attributed to the death of people infected with HIV (Simon et al., 2006).

The prevalence of HIV is not homogenous. It varies by place of residency, gender, age and ethnicity (National AIDS Council, 2006; Zimbabwe National Statistics Agency & Macro. Inc, 2011). This is discussed in detail in chapter two.

1.3 Natural history of HIV infection

Phase I: Primary HIV infection: The period from exposure and infection to the time when antibodies appear in the blood is about six weeks and is called primary HIV infection. It is characterised by an increase in viral load (the number of viral particles per millilitre of blood) and a corresponding decrease in white blood cell lineage called CD4 T-helper cells (Mindel & Tenant-Flowers, 2001). Entrance of the virus into human/host cells starts with viral attachment onto receptor molecules on the cells. This is followed by fusion of host and viral cell membranes. This process results in internalisation of the virus. Once inside the host cells, the virus releases its nuclear material which, through the activity of an enzyme called *integrase*, is integrated into the host cell genetic material to form a pro-virus. In this state, the virus is shielded from the host's immune system. Another enzyme called *reverse transcriptase* hijacks host cell replication "machinery". From then, the virus starts to transcribe genetic material and to direct the manufacture of viral particles which are later assembled by an enzyme called *protease* to form mature virus particles. These fill up the cell and later on enter the blood stream to infect new cells by budding out through the host cell membrane, destroying it in the process (Carter, 2007).

As this cycle continues, CD4 cells are destroyed while viral load increases. The virus disseminates to different organs of the body. Viral replication is fast during the first 2-6 weeks of infection. Newly infected people are at a higher risk of transmitting the virus, through body fluids such as genital secretions, blood, and cerebral-spinal fluid (Vergis & Mellors, 2000). During this period of immune-suppression which lasts between 6-12 weeks, the host has not started producing antibodies against the virus. Symptoms of infection are fever, sore throat, influenza like rash, and lymphadenopathy—swollen

lymph nodes. However, some people may be totally asymptomatic. This is as true for blood donors as it is for any other member of the population.

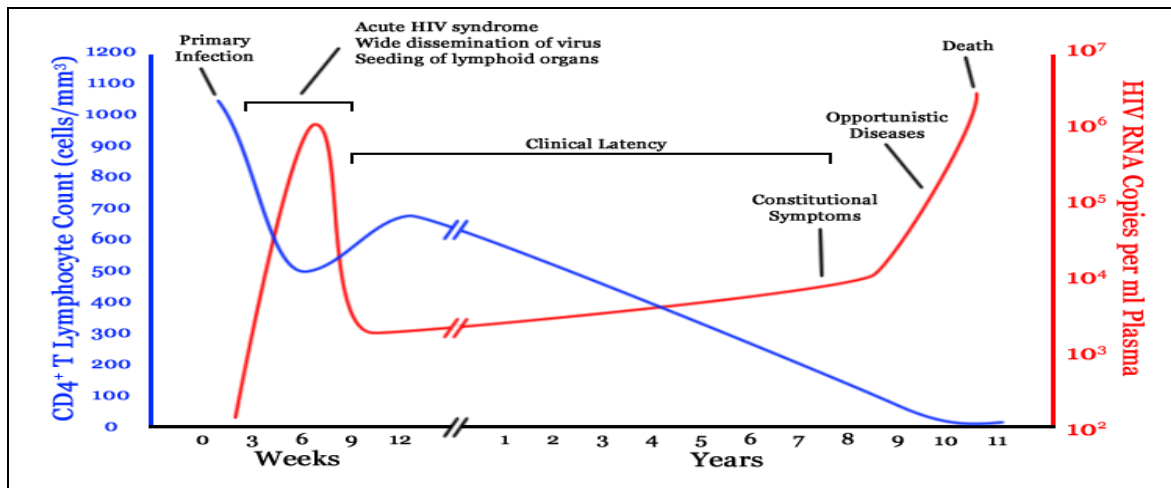


Figure 2: Natural course of HIV infection

Source: (Carter, 2007)

Phase II: Asymptomatic HIV infection: During this phase, antibodies are produced and are detectable in the blood. The viral load decreases and there is a concomitant increase in CD4 cells to normal ranges of 350-1500 cells per millilitre (mm³) of blood as shown in Figure 2 above. Once the sufferer's immune system gets better, s/he enters into an asymptomatic phase in which the viral load is at minimum level, but viral replication does not stop. This phase may last for 8-10, or even more years (Carter, 2007; Mindel & Tenant-Flowers, 2001; Vergis & Mellors, 2000). The infected person looks healthy but can still transmit the infection to their sexual partners or through blood transfusion. Blood donors with asymptomatic HIV infection may not disclose risk factors for HIV infection to the nurse during predonation counselling and may donate blood. This puts the lives of recipients at risk of HIV.

Phase III: Persistent generalised lymphadenopathy. This phase may persist for at least three months in a seemingly healthy person. Enlarged lymph nodes are some of the cardinal signs of infection that may be assessed during predonation interviews.

Phase IV: Symptomatic HIV infection. There is a decline in immune competence. The virus seeds itself into lymphoid organs such as spleen and lymph nodes to destroy immature CD4 cells, giving the infection the chance to replicate from sites where it had been latent. Progression to symptomatic HIV infection is dependent on age at infection, viral load at PHI and host's sexual behaviour and practices (Vergis & Mellors, 2000). A single unit of blood results in HIV infection in 95% of times (Kleinman & Busch,

2000). The viral load depends on the infectivity dose which is the quantity of virus that brings about the infection. Progression to the symptomatic phase is faster at extremes of age and among those indulging in risky sexual behaviour such as unprotected sex. The latter may acquire new HIV strains. Infected people suffer from skin and oral problems, night sweats, general body weakness and diarrhoea. At this stage it would be assumed that blood donors would not volunteer to give their blood, and that if they did, their clinical symptoms would be picked up by a nurse managing the donation session.

1.4 Contribution to the body of literature

- This study will fill knowledge gaps on sexual behaviour and practices among adolescent blood donors. Apart from explaining the observed upward trend in HIV incidence among this group, this study may also provide the basis for focussing future quantitative research to come up with results that can be generalised to a wider population of blood donors. This may also help to focus HIV programming among adolescents.
- The current ABC model on HIV prevention will be evaluated against observed sexual behaviour. This may provide ways to guide the direction of HIV prevention efforts among this group.
- This study is envisaged to provide recommendations and public health messages aimed at improving HIV prevention among adolescent blood donors.

1.5 Structure of thesis

This thesis comprises seven chapters. I organised the chapters in the following way: in the first chapter I introduced the background to the thesis as well as some recent history of Zimbabwe. In Chapter two, I present the literature review. I start by describing how I obtained, organised and evaluated the literature. The conclusion to the literature review focuses this thesis on the methodology to be used in exploring sexual behaviour among adolescent blood donors. I describe the research design, fieldwork and the theoretical framework in chapter three. Chapter three feeds into chapter four in which I describe how I analysed the data. In chapter five, I present the results for this study. I am going to divide this chapter into three sections: section A describes the demographic characteristics of study participants, section B describes the study context as given by the participants and section C looks into the sexual behaviour among adolescent blood donors. The discussion follows chapter five. Here I put the results into context, and relate them with existing literature to come up with a succinct, logical, and coherent report. Finally, I give the conclusion in chapter seven.

Chapter 2: Literature review

2.1 Introduction

In this chapter I review the literature on sexual behaviour among adolescent blood donors in Zimbabwe. I start by describing the procedures I used to obtain and evaluate the literature. Later, I describe how I organised the literature to identify major themes related to sexual behaviour and practices. The themes captured fall into two broad groups: contextual factors that shape the socio-economic environment in which Zimbabwean adolescents live and grow and behavioural factors. The link between sexual behaviour and contextual factors is described. Moreover, I use this review to identify both conflicting findings across different studies, and the gaps in the literature. The former are compared against study designs and sample sizes used. In concluding, I capitalise on the identified gaps to focus the study on the research design I am going to use to explore sexual behaviour.

2.2 Literature search and evaluation process

I systematically searched three electronic databases; EBSCO (composite of MEDLINE and CINAHL), Google scholar and PUBMED for English language articles published from 1996 to 2014. Most African studies on HIV are published in journals stored in these databases. The year 1996 was chosen because the National Blood Service Zimbabwe (NBSZ) database for blood donors became operational around that time. As a result, a large body of literature on blood donors was published from 1996.

The search terms I used are: HIV*, Zimbabwe*, "young blood donor*" and "school donor*". While quotation marks served to command the computer to search for the whole phrases in quotes, truncating with the asterisk served to capture all nouns coming from the truncated bases. School donor was considered an appropriate search term since most of adolescent blood donors in Africa attend school (Tagny et al., 2010). The search terms HIV and Zimbabwe served to restrict the search to Zimbabwean articles and to focus articles on HIV infection. However, I also considered other African studies, especially those involving meta-analysis of demography and health survey data.

Initially, I identified 40 articles relevant for this study. I discarded some of the articles that were not relevant to the topic. Twenty-one journal articles remained after this screening exercise. I supplemented these with grey literature in the form of annual reports and publications from the NBSZ, National AIDS Council and Zimbabwe

Demography and Health Surveys. Literature from the World Health Organisation (WHO) and Joint United Nations Programme on HIV/AIDS (UNAIDS) were also considered and so were references and bibliographies from the literature obtained. The final number of articles considered for this review was 30.

To organise these articles, I used the matrix method (Garrard, 2011) to evaluate the selected articles using a structured template with the following headings: purpose of study; predictor and outcome variable; study design; year in which data were collected; number of participants; data sources; main findings; validity and reliability of data. The matrix helped me to compare the main findings across both time and studies. The main variables identified to be associated with HIV infection were cultural factors such as ethnicity, place of residence, economic factors and individual sexual behaviour. I compared the inconsistent findings against study designs, sample sizes and year of data collection. Overall, risk factors for HIV infection fall into two broad categories: contextual factors (cultural and economic factors) and sexual behaviour factors (early sexual debut, condom use, multiple concurrent partnerships and age mixing). These are discussed below.

Adolescent blood donors, especially new blood donors (who give blood for the very first time), may suffer from the same physical, economic and socio-cultural challenges that affect adolescents in the general population. As such, their sexual behaviour and practices may not be different from those for adolescents in the general population. Between 2002-03, Mandisodza et al. (2006) observed that 66% (n=169/256) of the adolescent blood donors who tested positive for HIV infection were new blood donors. New blood donors are derived from the general population in which HIV prevalence is high. Thus, when describing sexual behaviour among adolescent donors, I also look at what happens in the general population.

2.3 Contextual factors affecting sexual behaviour and practices

2.3.1 Cultural factors

Culture is reinforced from a very young age through primary institutions of socialisation such as family. Once it is embedded within individuals, it may be difficult to challenge and interrogate its normative prescriptions on sexual behaviour. Sambisa, Curtis and Shannon-Stokes (2010) carried out a comparative analysis of the Zimbabwe Demography and Health Survey data among young men of Ndebele and Shona ethnicity, and observed that ethnicity reinforces and/or shapes sexual norms. In another

comparative analysis, Hillier et al. (1998) argued that culture may have different sexual norms for both men and women. They posited that while men are supposed to exercise dominance even in sexual encounters, culture may socialise women to be naive. Culture is ingrained earlier than both education and religion within the family units. Thus, cultural underpinnings on sexual behaviour, though subtle, could be stronger than education and religion (Sambisa et al., 2010).

Ethnicity is a cultural factor that has been shown to be closely linked with sexual behaviour. Some ethnic groups may make it more acceptable to have risky sexual behaviours such as unprotected sex which could lead to HIV infection (Sambisa et al., 2010). Zimbabwe continues to have marked geographical differences in HIV prevalence (Zimbabwe National Statistics Agency & Macro. Inc, 2011). The political boundaries are consistent with ethnic groupings thereby exposing within country variations in HIV prevalence. Recently, ZIMSTAT and Macro Inc. (2011) conducted a national survey and observed that in some provinces, HIV prevalence is higher than the national prevalence of 15%. Matebeleland South province had the highest prevalence of 21%, followed by Matebeleland North Province (19%), while the lowest prevalence of 13% was recorded in Harare which is predominantly Shona. Confidence intervals were not provided. However, territorial boundaries could be a potential confounder in Zimbabwe.

Ethnicity cannot adequately explain the observed difference. The difference can be better explained by taking geography into account. Matebeleland South province shares Zimbabwe's two major borders with high HIV prevalent countries: Botswana and South Africa (refer to Figure 3 below). The National AIDS Council (2006) reminds us that farming estates, border towns and mining towns have a higher HIV prevalence than cities. This could help explain the highest prevalence of HIV in southern Zimbabwe. Border areas are characterised by high physical human contact mainly from commercial sex workers, long distance truck drivers and cross border traders. As a corollary, a lot of transactional sex is reported at border areas (NAC, 2006). Considering that most of Harare is a densely populated urban area, and Matebeleland provinces are sparsely populated and predominantly rural, it could mean that ethnicity is stronger than place of residency in explaining HIV prevalence. A possible confounder could be that Matebeleland provinces have poor access to healthcare since it is sparsely populated. However, the role of ethnicity in explaining HIV prevalence cannot be ignored.

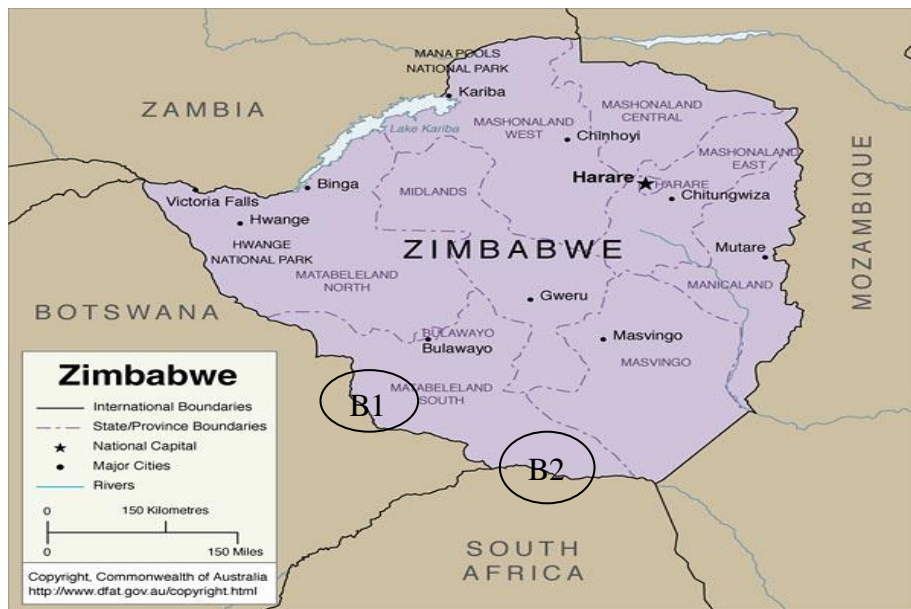


Figure 3: Political map of Zimbabwe showing the administrative provinces

B1-Plumtree border post with Botswana. **B2**-Beitbridge border post with South Africa
Source: (Maps of world, nd): Retrieved www.worldpress.org/profiles/zimbabwe.cfm

Ethnicity, together with marital status of being single may play a significant role in reinforcing gender roles such as masculinity in which males may want to "sleep around" with several women and/or have unprotected sex (Skovdal, Campbell, Nyamukapa, & Gregson, 2011). Sambisa et al. (2010) observed that masculinity seems to be reinforced along ethnic lines in Zimbabwe. They observed that young men of Ndebele ethnicity not only had a higher prevalence of HIV infection, they were also more likely to report early sex and multiple concurrent partnerships than their Shona counterparts. Paradoxically, young men of Ndebele ethnicity reported more condom use during sexual encounters than their Shona counterparts. However, high condom use reported among young men of Ndebele ethnicity may be misleading. The indicator used for assessing condom use was condom use at last sexual encounter. Doyle, Mavedzenge, Plummer and Ross (2012) offer a plausible explanation for such a disparity. They argue that the indicator used for condom use which is *condom use at last sex* leads to inaccurate results. This view is supported by the NAC (2006) which reminds us that for effective HIV prevention, correct and consistent use of condoms is cardinal. Apart from these inaccuracies, the disparity observed among young Ndebele men (high HIV prevalence *vis-a-vis* high condom use) could be explained by early sexual debut reported for this group.

Early sexual debut has been shown to be associated with both low condom use and with having sex with older partners (UNICEF, 2002a). Among adolescent men in rural

eastern Zimbabwe, Gregson et al. (2002) observed they may have sexual debut with single mothers or with commercial sex workers. Conversely, female adolescents are expected to be virgins at marriage. It is possible that by the time the young men of Ndebele ethnicity resort to condom use, they would have already acquired the infection. Later, condom use may be higher to avoid re-infection or infecting their partners (Gregson et al., 2002). This may explain similarities in sexual behaviour between young Shona and Ndebele men.

The study by Sambisa et al. (2010) does not provide us with vital information on the nature of the sexual relationships. Gregson et al.'s (2002) finding that male adolescents of Shona ethnicity had sexual encounters with single mothers is an indicator for power imbalances which may be inherent within these sexual relationships. Moreover, some Shona cultural practices such as *chiramu* in which a married man forces himself on his wife's younger sister conceal and propagate sexual abuse (NAC, 2006). Apart from marked age differences in sexual relationships, power may be further skewed towards the older person if economic factors are factored in. The role of economic factors especially in Africa is central to HIV/AIDS discourse, and the infection has flowed down the gradient of economic stability (Krieger & Ziegler, 1996).

2.3.2 Economic factors

Economic deprivation is one of the determinants of poor health outcomes such as HIV infection, and studies have shown that HIV infection is not inversely related to poverty (Joint United Nations Programme on HIV/AIDS, 2011a). Studies on blood donor and the general population of adolescents have shown that economic difficulties may influence risk-taking sexual behaviour, especially among female adolescents (Mandisodza et al., 2005; Stephenson & Obasi, 2004). Female adolescents may be coerced into risky sexual practices by older men, and research has shown that effective HIV prevention efforts should aim to address HIV in older men (Lewis et al., 2007; Stephenson & Obasi, 2004).

Between the years 2000-2009, Zimbabwe experienced one of the worst economic problems in modern history. Inflation figures soared to over 231 million percent (WHO, 2011) (refer to section 1.1 above). This might have had a disproportionate burden on adolescents, who may have adopted risk-taking behaviour as a result of material deprivation and uncertainty about their future (Global Youth Coalition on HIV/AIDS, 2008). The economic environment is still characterised by widespread food shortages,

poverty and unemployment figures in excess of 74% (Integrated Regional Information Networks, 2013; World Health Organisation, 2011). The National AIDS Council (2006) reported a high prevalence of HIV infection along major motorways during the era of hyperinflation when basic foodstuffs were scarce. Long distance truck drivers were responsible for promoting transactional sex. They had access to both foreign currency and groceries that were in short supply in Zimbabwe (NAC, 2006). Economic challenges were worsened by incessant droughts, political instabilities and HIV/AIDS. At the family level, HIV co-morbidities and deaths led to social and economic dislocations (Fisher & Foreit, 2002; Kang, Dunbar, Laver, & Padian, 2008). The National AIDS Council (2009) estimated that around 1.3 million children were orphaned as a result of HIV/AIDS, and about 50,000 households are headed by adolescents less than 18 years old. Among adolescent blood donors, high sero-conversion (when a previously HIV negative person develops antibodies against the infection) was associated with unemployment (Mandisodza et al., 2005).

Economic challenges may result in different sexual behaviour patterns and hence different health outcomes for both male and female adolescents. Magadi and Desta's (2011a) meta-analysis of demography and survey data from 20 African countries revealed that generally materially deprived male adolescents tend to delay sexual debut. While economic hardships may be protective against risky sex and hence HIV infection among orphaned male adolescents, (Mandisodza et al., 2005; Robertson, Gregson, & Garnett, 2010), the converse may be true for their female counterparts (Gregson et al., 2002; Kang et al., 2008). Kang et al. (2008) asserted that economic impact on female adolescents could be worse in the absence of maternal care and support.

Female adolescents are disproportionately affected by economic challenges. Female orphans who lost their mothers and those who lost both parents are more likely to be coerced into early sexual relations than both non-orphans and paternal orphans (who lost their fathers) (Kang et al., 2008; Robertson et al., 2010). They are also likely to be abused by strangers as well as close relations (UNICEF, 2002a). These findings were confirmed by Pascoe et al's (2010) baseline survey to a randomised controlled trial involving 6791 participants between 14-17 years. They observed that orphans were three times more likely to be HIV positive than non-orphans, [adjusted odds ratio (AOR) =3.4, 95% CI=1.8-6.6]. Moreover, they observed that orphans constituted more than two-thirds of all the HIV positive adolescents. This confirmed Kang et al.'s (2008) findings that orphans, especially maternal orphans who lost their mothers, were five

times more likely to be STI positive [(AOR)=4.9 (95% CI: 1.94-16.04)] and six times more likely to be pregnant [(AOR=6.42, 95% CI=1.98-20.76)] than non-orphans. Kang et al. (2008) used a relatively small sample size of 200 female adolescents between 16 and 19 years in rural Harare. However, their results can be relied upon: they controlled for social desirability bias through use of Audio Computer-Assisted Self-Interviewing techniques (ACASI) (van de Wijgert, Padian, Shiboski, & Turner, 2000) as a tool for collecting data. This approach ensures confidentiality and anonymity of participants.

Material and financial provision may be protective against risky sexual behaviour. Hallfors et al. (2011) conducted a randomised clinical trial among young girls from 12 years onwards, and concluded that without material and financial aid, orphaned female adolescents are six times more likely to drop out of school and three times more likely to get married than those who were adequately provided for. It would have been interesting had studies focusing on orphan-hood included age at maternal orphan-hood in their analyses. Maternal orphans are those who lost their mothers.

Age at maternal orphan-hood may help predict the likelihood of HIV acquisition through mother to child transmission. Mother to child transmission of HIV was considered a likely source of HIV infection among the HIV positive adolescents who reported *never had sex* and had a negative test result for herpes simplex virus type 2 (Ferrand et al., 2010; Gregson et al., 2002; Lewis et al., 2007). Herpes simplex virus type 2 is a biomarker for risky sexual behaviour, increasing chances of acquiring HIV infection (Gwanzura et al., 2002). In a cross-sectional study involving 594 adolescents between the ages of 10-18 years in the general population, Ferrand et al. (2010), considered MTCT the likely source of HIV infection among 80% (69/86) of adolescents who were HIV positive and tested negative for HSV-2. This was attributed to the "slow progressing HIV infection". These findings show that virgin adolescents may be HIV positive.

Risky sexual behaviour among adolescents is caused by many factors outside contextual factors described above. Studies have shown that even with material provision, for some reasons such as the desire to get married, adolescents indulge in risky sexual behaviour and practices (Gregson et al., 2002). Thus, notwithstanding the circumstances in which adolescents may find themselves, individual behaviour, the proximal determinant of HIV incidence, may determine their health outcomes.

2.4 Sexual behaviour factors

2.4.1 Early sexual debut

Early sexual debut is one of the drivers of HIV infection in Zimbabwe (NAC, 2006). Studies have shown that HIV prevention efforts lie in delaying the age at first sexual encounter (Crockett, Bingham, Chopak, & Vicary, 1996; Joint United Nations Programme on HIV/AIDS, 2013). This is because at a young age, adolescents may lack skills to negotiate for safer sex and to protect themselves against STIs and pregnancy (United Nations Population Fund, 2008). In Africa, Doyle et al. (2012) reported that around 25% of adolescents have sex before their 15th birthday. Nevertheless, the decline in age at first sexual debut is not uniform: it varies both across and within countries – something that can be attributed to differences in literacy levels, economic circumstances and/or heterogeneity of cultural factors shaping sexual behaviour and practices. The role of education in delaying sexual initiation may not be overemphasised in HIV prevention efforts.

Education has been shown to be protective for HIV infection by increasing levels of abstinence. Adolescents attending schools are more likely to delay sex by resisting sexual pressure from the opposite sex than those out of school (UNICEF, 2002a). Elsewhere, in a retrospective national study involving data for 53210 and 49003 adolescent blood donors that were collected between 2002 and 2003 respectively, Mandisodza et al. (2006) observed that among the HIV positive adolescent blood donors, the highest incidence (1.61% n=789/49003) was recorded among those who were out-of-schools. Confidence intervals were not given.

Zimbabwe has high literacy levels among young people between 15-24 (Gapminder, 2013; Global Youth Coalition on HIV/AIDS, 2008). In 1998, only 3% of adolescents had sex before the age of 15 years, and three years later, the figure had doubled (UNICEF, 2002a). The figures dropped slightly to 5% for both sexes between 2005 and 2006 (Doyle et al., 2012). However, a slight increase was reported for women in 2007 with prevalence of 4.5% and 5.3% for adolescent males and females respectively (Global Youth Coalition on HIV/AIDS, 2008). However, confidence intervals were not provided. In neighbouring Mozambique, with an adolescent literacy level of around 72% (Gapminder, 2013), Doyle et al. (2012) observed higher prevalence of early sex: 27% and 23% for adolescent males and females respectively, while in Zambia, the rates were 16% and 12% for adolescent males and females respectively. Although the

prevalence for Zimbabwe is low, absolute figures may be quite high considering that around 43% of the Zimbabwean population is below 15 years (WHO, 2011). Furthermore, NAC (2006) cautions us to note that prevalence data is not the best indicator for early sex. Prevalence data may be misleading since it depends on sample size – an attribute that varies from time to time. By contrast median age at first sex is a stable measure for early sexual debut.

Median age at first sex is decreasing in Zimbabwe. This is the age at which 50% of people already have had sex. Initially it was observed to be around 19 and 18 years for adolescent males and females respectively in both the general and blood donor populations (Gregson et al., 2002; Hallett et al., 2007). However, in a baseline survey to a randomised controlled trial, Langhaug et al. (2012) concluded that the median age at first sex had decreased to 17 years for both sexes in the general population. One potential pitfall by Laughaug et al. was that unlike Gregson et al., they did not control for social desirability bias. For cultural reasons, female adolescents are likely to say they had sex at a later age while their male counterparts are likely to report an early age at first sex (Do & Meekers, 2009; Gregson et al., 2002).

Early sexual debut is associated with a low level of education and female gender especially in rural areas (Doyle et al., 2012). This is consistent with Mandisodza et al.'s (2006) findings that adolescent blood donors not attending school had a higher incidence of HIV infection than those attending school. Among those in school, female day scholars had the highest incidence of HIV (0.87%) while the lowest incidence (0%) was recorded among male boarders (Mandisodza et al., 2006). Female adolescents may be exposed to older men in their communities who may coerce them into early sex.

Early sex is an indicator for power-skewedness in sexual relationships (Gregson et al., 2002). On the one hand, female adolescents may not have the bargaining power for safer sex as abstinence cannot be expected in such relationships. On the other hand, older men may have little incentive to use condoms: they may consider female adolescents to be virgins and therefore, less likely to have HIV infection. Perhaps, this explains why condom use may be low in unbalanced sexual relations (UNICEF, 2002a). Median age at first sex may change with time. Since Laughaug et al.'s (2012) study, there is no data for the median age at first sex among adolescent blood donors. This could help estimate their level of condom use.

2.4.2 Condom use

Condom use among young people continues to be low in Zimbabwe (GYCA, 2008). It is one of the ways to prevent the transmission of HIV infection and other STIs. However, only 31% of young people aged 15-24 years reported condom use during the 2007 survey (GYCA, 2008). Condom use has been shown to increase with age. Adolescents who debut sex early are less likely to use condoms at sexual initiation than those who have sex at a later age (UNICEF, 2002a).

In Zimbabwe, condom use is promoted by the National AIDS Council through the abstinence, be faithful and condom use (ABC) model for health promotion. Correct and consistent use of condoms, especially in irregular partnerships is emphasised through behaviour change messages in both print and electronic media. The messages are aimed at educating the public about HIV prevention methods. Nevertheless, effective use of condoms is possible when adolescents make informed decisions to protect themselves against STIs including HIV (UNFPA, 2008). The Global Youth Coalition on AIDS (2008) draws our attention to the HIV knowledge gap among adolescents. They observed that only 40% of young men and 36% of young women had accurate knowledge about HIV transmission and prevention. Recently, ZIMSTAT and Macro Inc. (2011) reported that more than 60% of young men and women who had never married and had never had sex were least likely have knowledge of condom use and to know that having sex with one uninfected partner reduces the risk of HIV transmission. This is inspite of a 90% coverage of voluntary counselling and testing centres (VCT) in the country (UNAIDS, 2011b).

Meanwhile, the school-based sex education programme is provided in all Zimbabwean schools and serves to equip adolescents with life skills (GYCA, 2008). As Rosen, Murray and Moreland (2004) have argued, translation of knowledge acquired from this programme into behaviour change may be difficult because of structural barriers in the form of youth-unfriendly reproductive health services.

African culture is conservative. The idea of condom education and its distribution in schools is not yet well received in some countries (Doyle et al., 2012). For example, recent efforts by the National AIDS Council to distribute condoms in Zimbabwean schools caused a national debate (Murombedzi, 2011). For parents, access to condoms by adolescents could be a "recipe" for early sex. Moreover, from my personal knowledge, Shona culture socially constructs sex as a preserve for married people only.

As such, aunties¹ discuss sex with only those female adolescents that are ready for marriage. Condom education is rarely discussed: traditionally, condoms were associated with commercial sex work and therefore, had "no place" in the home. As Amaro (1995) argued, gender roles that stress the value of motherhood are culturally an obstacle to condom uptake and use. Moreover, some traditional methods of marriage such as *kutizira*, whereby a young woman elopes to a husband thrive well when she is pregnant. In this regard, unprotected sex may be useful for one to get married (Gregson et al., 2002). This has implications for condom negotiation among female adolescents who are ready for marriage. The failure by aunties to include condom use as an agenda item in pre-marriage teachings may open avenues for HIV infection. These traditional methods have failed to evolve with both time and gender power dynamics within the sexual arena, thereby leaving female adolescents vulnerable to HIV infection.

At a personal level, knowledge about the declining prevalence of HIV may affect condom uptake and use. Following the significant decline in national HIV prevalence from 24.6% in 2003 to 15.6% in 2007 (WHO, 2007), the UNAIDS (2011) reported that some adolescents reverted back to risky sexual behaviour. UNAIDS reported low condom use among young men (UNAIDS, 2011). This could be attributed to peer pressure and cultural factors such as ethnicity which may instil a low risk perception about contracting HIV infection (Do & Meekers, 2009; Sambisa et al., 2010). Moreover, Masciotra (2013) asserted that adolescents blame condoms for "stealing" sexual pleasure. This is likely if the risk of contracting STIs is perceived to be low.

Among adolescent blood donors, the perception of HIV risk may be minimal owing to the comparatively lower incidence of HIV than that in the general population. Their sexual partners may not want to use condoms. Furthermore, the impression that blood donors are HIV negative may be misconstrued as an incentive to ignore condoms altogether in sexual encounters involving these "saints".

Condom use is a complex concept whose roots may be deeply embedded in the power dynamics exercised within the sexual arena. More often than not, background factors such as nature and duration of sexual relationships come into play. For example, while low condom use can be attributed to sexual relations premised on power imbalances (UNICEF, 2002; Hillier et al., 1998), other researchers (e.g. Gregson et al., 2002) argue that even in balanced sexual relations, condom use can be high during the early stages,

¹ Father or mother's sisters

and then discontinued with increased "trust" as the relationship progresses. Conversely, high condom use could be associated with promiscuity and/or casual sex: those who know or suspect they are HIV positive may make efforts to use condoms in a bid to protect either their partners from HIV infection or themselves from re-infection with HIV (Gregson et al., 2002). This exposes the dynamic nature of sexual behaviour.

Level of education may not always show a positive correlation with condom use. Educated adolescents may not be keen to use condoms in sexual encounters. The NBSZ still considers both school and university students to be low risk populations from which they can get the bulk of blood. The results were revealed in a cross-sectional study conducted on a population of 518 students in western Zimbabwe which is predominantly Ndebele. Knowledge about HIV infection was found to be negatively associated with positive attitudes towards condom use (Cort & Modeste, 2006). Clearly, these findings are inconsistent with the high condom use described for the same ethnic group (Sambisa et al., 2010). This study was conducted in two private institutions and the results may not be generalisable to a wider population of young people.

Attitudes towards condom use have not been assessed on blood donors in Zimbabwe. Drawing from the Health Belief Model (Rosenstock, Strecher, & Becker, 1988), young people may change their sexual behaviour depending on their knowledge and attitude. Attitude is a function of perception of risk to HIV, perception of HIV as a serious disease, belief in the effectiveness of condoms and lack of barriers to accessing condoms (Cort & Modeste, 2006). The observed negative attitude towards condom use by students can be attributed to lack of effective behaviour change messages during May and July 2003 when data were collected. The National HIV/AIDS policy was launched in 2003 (see section 1.1.1), and it may be possible that massive behaviour change campaigns may not have started when data were collected. By 2005, when data for the study by Sambisa et al. were collected in the same ethnic group, attitudes towards condoms may have changed. This exposes the dynamics of sexual behaviour even within short periods.

2.4.3 Multiple concurrent partnerships

Multiple concurrent partnership (MCP) is having two or more sexual partnerships at the same time (NAC, 2006). It has been shown to be the strongest predictor of both HIV infection (NAC, 2006) and HIV risk perception (Do & Meekers, 2009). The risk of one passing HIV infection to a sexual partner is high since newly infected individuals have a

higher viral load (Carter, 2007; National AIDS Council, 2006; Vergis & Mellors, 2000). Partnerships may overlap to form sexual networks. Some people within MCPs, especially older men, may have sexual relations with both commercial sex workers and their wives. The position within the sexual network becomes crucial and marriage has ceased to be protective against HIV infection (NAC, 2006; Magadi & Desta, 2011a). A cohort study by McFarland, Mvere and Katzenstein (1997) showed that blood donors in MCPs are twice likely to sero-convert than those in single relationships (OR=2.1, 95% CI: 1.4-2.9). But what could be fuelling this practice?

According to Mavhu et al. (2011), in Shona culture, concurrency is considered to be more acceptable for men as compared to women who are less likely to report it. They reported different contexts put forward for acceptability of MCP: for men, this practice was considered acceptable in contexts such as infertility and lack of male heir, while among women, MCP was considered acceptable in cases of sexual dissatisfaction and/or material deprivation. However, women's justifications for MCPs seem to vary depending on level of education and/or age. While for women, mostly in rural areas (with low levels of education), material deprivation and need for sexual satisfaction justified MCP (Gregson et al., 2002), in urban areas, MCP was found to be associated with high levels of education among women (Doyle et al., 2012). Perhaps this is because of the asymmetrical distribution of educational services between rural and urban areas which indicates that low education is common in the former. By contrast, ZIMSTAT and Macro Inc. (2011) denied the association between MCP and low education among women; instead, they observed a positive association between MCP and high education among men. This latter assertion concurs with high HIV sero positivity observed among employed male blood donors (Mandisodza et al., 2005). This is plausible in the sense that employed men are likely to have high levels of education and money to command a high social standing which can be used to lure women. Moreover, disposable cash makes it easy for them to afford paid sex.

Inconsistencies between the findings by Doyle et al. and ZIMSTAT and Macro Inc. on the role of women's education on MCP cannot be explained by study designs or sexual behaviour dynamics related to time: both sets of data were collected during the 2010-11 period. Moreover, both studies involved secondary analysis of national demographic and health survey data. However, Doyle et al.'s (2012) study, unlike the other, was not specific to Zimbabwe; it was a meta-analysis of 10 African demography and health survey data. Inconsistencies could be explained by looking at the age groups involved.

Young females less than 20 years old are likely to be in school and may suffer from material deprivation whilst educated women are likely to be working and may need enjoyment. Enjoyment can be enhanced when the prevalence of life threatening diseases such as HIV is low. This may lower the risk perception of contracting HIV, increasing the likelihood of risky sexual practices such as MCP. Risky behaviour following the decline in national HIV prevalence was described (UNAIDS, 2011). Young men may indulge in MCP due to peer pressure, yet they may not consider themselves to be at risk of getting HIV infection (Do & Meekers, 2009).

For MCP to flourish, female adolescents have to look for financially stable men who can take care of their material needs in return for sexual favours. Such men are likely to be remarkably older than them. Despite their relations with older men, female adolescents may keep some young men as potential husbands (Gregson et al., 2002). Thus, there is an interface between MCP and age mixing.

2.4.4 Age mixing

Age mixing is when adolescents are involved in sexual relations with partners that are at least 10 years senior than them, and it explains why HIV infection is transmitted to the younger generation (NAC, 2006). Age mixing is more likely to be common in urban areas, especially high density areas. The urban environment is characterised by high physical human contact and poor living conditions that can challenge cultural restraints on intergenerational sex (Kawachi & Wamala, 2007). In South Africa which is more urbanised than Zimbabwe, the British Broadcasting Corporation (2013) reported that school girls are seven times more likely to be HIV positive than their male counterparts— something attributed to sexual partnerships between the school girls and older men or "sugar daddies".

Among blood donors, living in high density areas was reported to be positively associated with risk of HIV infection (McFarland et al., 1998). Nowadays, rapid urbanisation and the blurring of territorial boundaries due to population hyper-mobility could mean that even in rural areas, age mixing cannot be ruled out. Gregson et al. (2002) observed that female adolescents in the general population are involved in sexual partnerships with older men. The reasons put forward were material deprivation, to get a husband and for enjoyment. Leclerc-Madlala (2008) observed that enjoyment stems from enhanced self-worth and prospects of attaining long-term life opportunities that may be unlocked by the sexual partners. Elsewhere, in a meta-analysis report involving

analysing the 2005-06 Zimbabwe Demographic Health and Survey data, Doyle et al. (2012) observed that 13% of Zimbabwean female adolescents of ages 15-19 years in the general population had male partners who are at least 10 years their senior. The age difference could be even higher since social desirability bias cannot be ruled out. For cultural and religious reasons, women tend to under-report age mixing. Once again, the role of economic factors in shaping and propagating this practice comes to the fore. Taking into account the economic challenges that Zimbabwe faced, age mixing might have increased. Among adolescent blood donors, this variable has not been assessed. Since adolescent blood donors face the same challenges as those in the general population, lack of information on this variable is a huge gap in knowledge.

Female adolescents are disproportionately affected by HIV infection. In a retrospective national survey involving 102,213 adolescent blood donors, Mandisodza et al. (2006) observed that females were three times more likely to be HIV positive than their male counterparts. Although the overall incidence of HIV infection was 0.38% in 2003, gender disparities were quite evident. Disaggregated data were 0.18% and 0.55%, for males and females respectively. However, the study was purely descriptive and could not explain reasons for the difference in HIV incidence. This review has shown that there are many ways to explain high HIV among female adolescents. Apart from age mixing and MCP, sexual abuse may also help explain high HIV among female adolescents.

Female adolescents, especially orphans, are likely to be sexually abused by people who may not use condoms (UNICEF, 2002). This is consistent with Pascoe et al.'s (2010) findings wherein double orphans, who lost both parents, reported forced sex in which condoms were not used than non-orphans [(AOR=3.73 CI:1.37-10.18)]. Elsewhere, in a cross-sectional study involving 1283 female adolescents (14-19 years) in the general population, Asuka et al. (2012) reported that at least 11% of those who left school early were either coerced or physically forced into sex. When compared to those attending school, those who left school early were three times more likely to have suffered sexual violence [AOR=3.47 (1.75-6.89)]. Considering the high prevalence of HIV in Zimbabwe, sexual abuse may be an important avenue for HIV transmission from older to younger generations. Sexual abuse is initiated by many factors.

Some misconceptions that are advanced by traditional doctors about HIV such as "having sex with a virgin cures HIV" have put female adolescents at risk of HIV

infection (UNICEF, 2002). However, studies have shown that there is no guarantee that virgins are HIV negative (Ferrand et al., 2010; Gregson et al., 2002; Lewis et al., 2006). Biological factors come into play. Female adolescents have immature vaginal epithelia. During sex, they tear easily, especially, if the act is forced and the females are virgins. This makes it easy to contract HIV (Simon et al., 2006).

The need to maintain virginity by resisting sexual pressure from men may make it difficult for female adolescents to negotiate their way past the adolescent stage. In the Zulu culture of South Africa where virginity is celebrated at marriage, some "safety-nets" are provided for young women to maintain their virginity. Young betrothed women can reduce sexual pressure from their would-be husbands by offering thigh sex (*kuhlomela*) (Powell, 2008). Where these "safety-nets" have not been endorsed by culture, there are reports that young women may resort to unprotected anal sex to reduce sexual pressure from young men (UNICEF, 2002). The omission of unprotected anal sex in safe sex messaging may be misconstrued as meaning that it is a safer alternative than vaginal sex (IRIN, 2013a). The risk of receptive unprotected-anal sexual intercourse is 20 times greater than that of receptive vaginal intercourse (IRIN, 2013b). This may explain why female adolescents are disproportionately affected by HIV.

2.5 Conclusion

Sexual behaviour is a complex and dynamic phenomenon. Its complexity is increased because there is denial about it: adolescent blood donors, are still considered to be not indulging in sexual activities. A dearth of social research to explore this phenomenon among adolescent blood donors has resulted in a major knowledge gap. Previous research on blood donors was mainly retrospective and quantitative in nature, and relied on secondary data in the blood donor database. This meant it was almost impossible to tackle the complexity of sexual behaviour among blood donors in general and adolescent blood donors in particular. This complexity has been increased by the role that may be played by cultural and economic factors in shaping and propagating sexual behaviour and practices. Although some contextual factors such as place of residency and economic factors have been described in previous research, there is much to be known about sexual behaviour among adolescent blood donors and its interplay with these factors. Furthermore, behaviour factors such as multiple concurrency partnerships, age at first sex, age mixing and condom use have not been assessed among this group.

In this study, apart from exploring sexual behaviour, additional focus will be on understanding why adolescent donors behave the way they do. This approach captures detailed information from the experiences and perspectives of adolescents. I argue that such an in depth understanding of sexual behaviour may be obtained if this group is given the platform for their voices to emerge and to be articulated. Quantitative research has not given them this chance and this could be a missed opportunity. In the next chapter, I describe the research design I will use to explore sexual behaviour and practices among adolescent blood donors in Zimbabwe.

Chapter 3: Methodology

3.1 Introduction

Sexual behaviour is dynamic and complex. The literature review showed that behaviour such as condom use may be shaped by factors ranging from the nature and duration of sexual partnerships, to perception of HIV risk and wider factors such as cultural underpinnings. To explore this phenomenon with respect to adolescent blood donors in Zimbabwe, I sought to identify even those factors that propagate and shape sexual behaviour. In this chapter, I describe the research design for this study. I start by giving the theoretical framework. Later, I describe the sampling and data collection procedures as well as the data quality control techniques I used. Within the section covering data collection procedures, I devote special attention to the way I asked the questions to enhance the generation of detailed responses. In closing, I describe the measures that I put in place to ensure both validity and security of the data.

3.2 Theoretical framework

Proximal determinant model (PDM): This model focuses on behaviour factors such as condom use, age mixing, and early sexual debut as explanatory variables for HIV incidence among adolescent blood donors. Proponents of the PDM (e.g. Boerma & Weir, 2005; Lewis et al., 2007) assume that proximal factors are best predictors of contextual factors, and that sexual behaviour is wholly controlled and initiated at an individual level (Amaro, 1995). However, orphans, especially female adolescents, are more likely to be coerced into early sex by older men. Under such circumstances, early sex is not voluntary; instead, Amaro (1995) argues that it is impulsive. The PDM approach may not capture the role of contextual factors such as economic deprivation on sexual behaviour. To this end, this model has a narrow focus, and "real causers" of sexual behaviour and practices may not be identified. Such omissions may result in huge knowledge gaps. Furthermore, the "blame-the-victim" nature of this model may encourage stigma and discrimination (Krieger, 2001).

Drawing from Braveman, Egerter and Williams' (2011) upstream-downstream metaphor, HIV incidence among blood donors may be explained by contextual (upstream) factors, instead of individual sexual behaviour (downstream) factors. This approach is in sync with the Social Production of disease Theory (SPT) which conceptualises that diseases are shaped by the country's political, social and economic context (Krieger & Zierler, 1996).

The SPT targets contextual factors which shape sexual behaviour among adolescent donors. These factors can stratify populations into different sexual behaviour on the basis of ethnicity, sex and socio-economic status. The SPT may explain the impact of structural adjustment programmes and economic sanctions on Zimbabwean adolescent blood donors. This approach does not blame adolescents for their sexual behaviour and hence high incidence of HIV, instead, it seeks to identify the factors that may be propagating and/or shaping their sexual behaviour. Thus, the SPT demands us to shift our attention from sexual behaviour towards identifying upstream or contextual factors within the adolescent blood donors' socio-economic environment. These factors may present the best opportunity to improve population level health when interventions that shift structural conditions to alter social determinants of disease are applied (Braveman et al., 2011; Krieger & Zierler, 1996).

Contextual factors may not always predispose one to have risky sexual behaviour. The role of background factors such as education in promoting abstinence was described (Hallfors et al., 2011). Some studies observed that economic factors may prescribe different sexual behaviour for male and female adolescents (Magadi & Desta, 2011a), while individual behaviour such as condom use may be due to both economic deprivation (contextual factor) or misconceptions about condom use which is an individual factor. This exposes inadequacies associated with relying on one model.

In this study, I am going to use a hybrid of both the PDM and the SPT as the social lenses to look into this social phenomenon. Although the two models are at variance, for the purpose of this study, the hybrid helps to provide a holistic approach to describing sexual behaviour among adolescent blood donors. Such an approach has the potential to empower adolescent blood donors when structural factors are identified, and structures of power engaged along emancipatory lines (Green & Labonte, 2008). The theoretical framework is depicted in Figure 4 below.

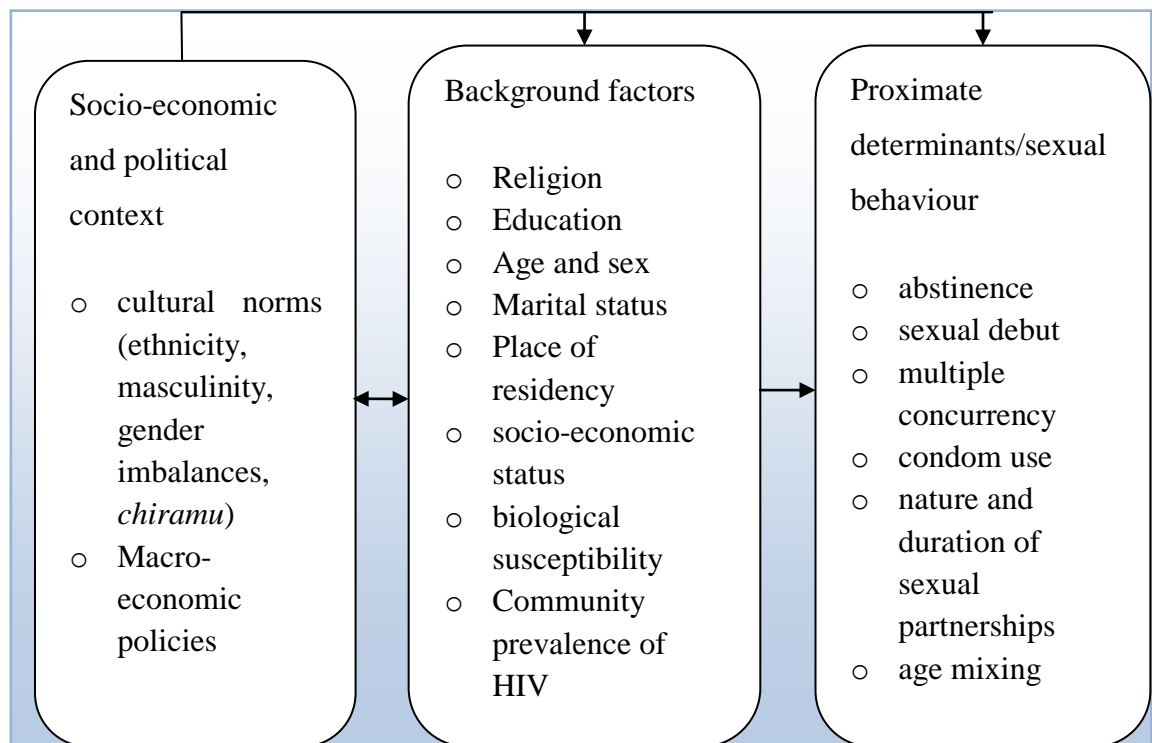


Figure 4: Conceptual framework for sexual behaviour among adolescent donors

Adapted from Solar and Irwin (2007).

3.3 Research Design

Owing to the complexity and interconnectedness of sexual behaviour with contextual factors, I chose a qualitative approach to explore this phenomenon among adolescent blood donors. Kitzinger (1994) noted that complex and/or non-linear social phenomena cannot be effectively explored through the use of premeditated responses to survey questions. Meaning about adolescent blood donors' sexual behaviour can be derived from their everyday language in the form of jokes, slang, metaphors and imagery. Only those methods that can "dig deeper" can get such meaning.

A qualitative study aids description of life from the view-point of people who experience(d) the phenomenon (Silverman, 2004). To tap into the microcosm of how the participants view the world around them, as a researcher, I made efforts to set aside my own pre-suppositions, and let the participants create their own meaning (Curtis & Curtis, 2011; Seidman, 2006). Kvale and Brinkmann (2009) referred to this as "deliberate *naïvete*" – researcher's openness to new and unexpected phenomena (p.28).

A quantitative method is a different approach, though on the other side of the gulf – the positivist paradigm. However, the complexity of this social phenomenon meant that it

might have been difficult for this approach to explore sexual behaviour in depth. Quantitative methods do not give space for the voices of participants to emerge. A lot of vital information might have been missed had this approach been used. Conversely, quantitative approaches rely on large and randomly selected sample sizes to give results that can be generalised to a wider population of adolescent blood donors. Still, the complexity of sexual behaviour was going to be a major "handicap".

To this end, I considered a qualitative methodology more appropriate than a quantitative one. The former has the potential to answer the research questions for this study and to focus future quantitative research by giving societal definitions of some constructs.

3.4 Ethical considerations

Ethics approval to carry out this study was granted by the Auckland University of Technology Ethics Committee in July 2013, approval number 13/115 and the Medical Research Council of Zimbabwe in August 2013, approval number MRCZ/B/548 (refer to appendices A and C). This study is in line with the tenets for research on humans as expounded in both the declaration of Helsinki and the Belmont report. It fulfils the following ethical requirements: participation, informed consent, protection, socio-cultural sensitivity and partnership. These are described below.

National Blood Service Zimbabwe (NBSZ) participation: In this study, I ensured community participation through engaging the NBSZ, the custodians of the blood donor community. A collaborative agreement between AUT University and NBSZ formed the basis for cooperation of the latter in this study (appendix B). The NBSZ provided logistical support, space for me to work in during fieldwork and a lockable cabinet. Moreover, to ease recruitment of participants and the process of data collection, an academic coordinator based at NBSZ, Harare was identified. His roles comprised making logistical arrangements and advising me on the best time to travel to Zimbabwe for data collection. He also organised a lunch-time research seminar which was a platform for me to deliver a Power-point presentation of this study to NBSZ staff and management. This was meant to bring awareness about the study to all the staff.

Participation by the study participants: Due to the sensitive nature of the study topic, I asked all the adolescent participants to choose to be interviewed by either myself or the research assistant (female) whom I recruited to interview those adolescent participants who were not comfortable talking about sexual behaviour to a male researcher. Prior to the interview, I called all the participants and asked them to take

part in decision making with regards to time, date and proposed venue for the interview. On the day of the interview, I and the participant inspected the venue. The interviews proceeded after the latter concurred that the venue ensured privacy for the interview. The participants helped by setting up seating arrangements and by answering interview questions. One of the female adolescent blood donors helped in the recruitment of her friend when the number of female adolescent was small.

Informed consent: Informed consent includes information, comprehension and freedom to volunteer (Zimmerman, 1997). Study information stating the intended benefits and perceived risks of the study was in lay language that could be understood by the participants. Both the participant information sheet and the informed consent forms were in both Shona and English. All the participants enrolled into the study voluntarily, and not out of coercion, whether material or verbal (Zimmerman, 1997). From the day the participants got the participant information sheets, they had up to a week to decide on whether to take part in this study or not. I encouraged adolescent participants to consult their friends or guardians, if they wished to. Participants got the opportunity to ask questions and sign the informed consent form before the interview.

Protection of adolescent participants was embedded within the recruitment procedure. I advised all the participants who personally knew me not to respond to the one page summary advert. This was done to eliminate possible coercion, bias and power imbalances during the interview. Moreover, I gave all the adolescent participants the freedom to ask a friend or relative to give them moral support by accompanying them to the venue for the interview. For confidentiality purposes, support persons were not meant to be part of the interview. However, none of the participants invited a friend.

Confidentiality of participants was ensured throughout this study: I stressed to the female research assistant the need for strict confidentiality of participants' information. Moreover, I ensured confidentiality of data in the transcripts and final reports through use of pseudo-names that were provided by the participants on the day of the interview. Similarly, I excluded names of places and occupational titles in all the transcripts and final documents so that participants were not be linked to their responses in any way. This was discussed before the interview. I gave further confidentiality assurances to adolescent blood donors for them to know that the data gathered were going to be used for the sole purpose of the study, and not going to be linked to their donation records. No data were made available to third parties since I did all the transcription and

translation of Shona transcripts to English Microsoft Word. Moreover, I stored all the transcripts, and audio recordings in a lockable metal cabinet, of which I had sole access. However, I informed all the participants that my supervisor based in New Zealand was going to access the English transcripts.

3.4.1 Study setting

I purposively selected Masvingo and Harare provinces owing to a high prevalence there of STIs (National AIDS Council, 2006). Moreover, I understand the language and culture in these provinces. I collected data from early September to mid-October 2013. During this period Zimbabwean school children do not have looming examinations. For those not attending school and/or staying in rural areas, there is not any work to do in the fields around this time. As a result, I did not anticipate major disruptions to the participants' socio-economic activities.

3.4.2 Selection of study participants

In this study I chose two groups of participants: adolescent blood donors (drawn from communities, schools and tertiary institutions) and key informants. The latter are “people who are knowledgeable about a topic of interest and can help the researcher have a better understanding of what is happening” (Patton, 2002, p.321). Key informants had the potential to give detailed responses about sexual behaviour among adolescent blood donors. This is so because they interact with this group regularly. For this reason, I selected the key informants from three categories of professionals: NBSZ HIV counselling partners, community nurses and HIV counsellors in the public sector. Their responses served to validate the responses from the adolescent participants.

3.5 Sampling method

Qualitative methods thrive on getting rich or detailed data from a small sample size. However, a small sample size does not matter since information-rich cases are targeted. These are participants most likely to give detailed responses (Patton, 1987). Recruitment proceeded in the following manner:

3.5.1 Inclusion criteria

All of the male and female adolescent blood donors within the age category 18-20 years, inclusive and had donated blood at either Masvingo or Harare provinces, were eligible to participate in this study. In this study, age is defined as number of years at last birthday. I chose the age category 18-20 years since it lies within the age group (16-

20 years) in which the incidence of HIV is increasing. The minimum age was 18 years since these participants were old enough to give informed consent.

All the key informants from the professional fields given in **3.4.2** were eligible provided they had been practising in either Harare or Masvingo provinces for at least two years. I adjudged that by practising for such a time, they would have gained a certain level of experience.

3.5.2 Exclusion criteria

All adolescents and key informants who were known to me were excluded from the study. Moreover, I excluded the following groups: all adolescent blood donors registered at other NBSZ branches, professionals other than those identified in section **3.4.2** above, those adolescents who refused to participate in this study and those adolescent donors who were under 18 years old at the time of data collection.

3.5.3 Recruitment procedure for adolescent blood donors

Data collection began in Harare province where I interviewed 10 participants. Recruitment of male adolescents in Harare was relatively easy for me since data collection coincided with the "Pledge 25 Club Men's splash". This is an activity when male adolescents who pledged to contribute 25 donations in their lifetime came and gave blood in their numbers. The research assistant and I took this opportunity to distribute both the one-page summary adverts and the participant information sheets. To save on transport costs and time, I stayed in Harare until I had interviewed 10 participants. I later on moved to Masvingo province where I got the other four participants. With the exception of male adolescents in Harare, recruitment and selection of all the adolescent blood donors proceeded in the following manner.

Prospective participants received one-page summaries of the study from NBSZ mobile team staff during blood donation visits. The summary gave them a brief overview of the study, including the purpose and eligibility criteria. The summary asked those who read and were not interested in taking part in the study to pass it on to their friends. Prospective participants who were interested in the study received two copies of the participant information sheet (in both English and Shona) from NBSZ staff. This document described the study procedure, as well as risks and benefits involved in this study.

From the time the prospective participants got the participant information sheets they had up to a week to make their decision to participate in this study. Those who were willing to take part in this study used the *please call me back*² facility to contact me on the contact numbers provided in the participant information sheet.

Initially, I targeted 10 adolescent blood donors and three key informants. However, I put in place mechanisms to deal with either over-recruitment or under recruitment. In cases of over-recruitment (number of adolescents who volunteered to take part in the study was more than 10), I was going to use variables such as duration as a donor, place of residency and sex as the basis to reduce the sample size to 10. In the event of under recruitment and/or the saturation point (where no more new information emerges) not having been reached (DiCicco-Bloom & Crabtree, 2006; Richards, 2009), I was going to recruit additional participants using snowballing techniques whereby participants were to refer their friends who met the inclusion criteria to me. These participants were to be provided with both Shona and English copies of the participant information sheet to give to a friend, who if interested in taking part in the study, contacted me directly using the procedure described above. Additional participants were to be recruited subject to availability of time and resources. However, one referral per participant was to be considered. Patton (2002) cautions us that friends may have similar behaviour and experiences. As a result, snowballing may not yield new information. I recruited one female adolescent participant using the snowballing technique.

3.5.4 Recruitment procedure for the key informants

Initially, I observed protocol by engaging the NBSZ management and the office of the Permanent Secretary in the Ministry of Health and Child Care. This gave me access to both the NBSZ counselling partners and the community nurses.

I used stratified purposive sampling techniques to recruit and select three key informants from each of the professional groups mentioned in section 3.4.2 above. I had previous knowledge about individuals who were in a good position to give me detailed information about sexual behaviour among adolescents. Initially, I distributed six participant information sheets (two for each professional group) to selected prospective key informants. Those willing to take part in the study contacted me directly using the procedure described in 3.5.3 above. To avoid potential coercion and possible conflict of interest based on my previous role at NBSZ, I targeted only those NBSZ counselling

² A mobile service for people to send free messages requesting their loved ones to call them

partners (HIV counsellors who help the NBSZ in counselling those donors who test positive for blood borne infections) who did not know me personally.

3.5.5 Evaluation of qualitative interviewing techniques.

Qualitative data can be collected using different techniques such as focus group discussions (FGDs), semi-structured and in-depth (unstructured) interviews. The choice of any of these techniques depends on their ability to answer the research questions.

Bloor, Frankland, Thomas and Robson (2001) describe an FGD as a socially legitimised group that engages in the clarification and explanation of previously taken-for-granted assumptions. They argue that participants in FGDs can challenge some normative or taken-for-granted values and customs on say, the role of cultural factors on sexual behaviour. Thus, in an FGD setting, ideas can be refined. This is different from an interview setting where the participant's line of thinking is not challenged. Moreover, in FGDs, participants who are not prepared to give a response have the latitude to keep quiet, "incubate" and refine their ideas before they give a response. Furthermore, participants can build on a "skeleton response", to come up with a coherent and richer response. This is not possible during interviews.

However, an FGD environment may not guarantee one's privacy. As a result, the reliability of findings in such a setting may be affected, especially considering the sensitive nature of this study. Social desirability bias cannot be ruled out in an FGD setting. This is the tendency of study participants to give responses that are in line with social norms instead of responses that reflect their behaviour (Grimm, 2010). Previous researchers (e.g. Gregson et al., 2002) noted that for cultural and religious reasons, Zimbabwean female adolescents tend to underreport sexual behaviour, while the converse is likely for male adolescents. If FGDs were to be used in this study, detailed information on sexual behaviour and experiences may not be obtained, particularly for sexual practices such as gay sex that are stigmatised and criminalised in Zimbabwe. But what really informed my choice for semi-structured interviews as the data collection technique for this study?

Kvale and Brinkmann (2009) posited that interviewing methods rest on the practical skills and value judgements of the researcher. There is a third aspect to consider – topic at hand. Due to the sensitive nature of exploring sexual behaviour, I ruled out an FGD

as a data collection method for this study. Left with in-depth and semi-structured interviews, I used Taylor's (2005) criteria to choose between these two. She argues that the choice of technique depends on the following:

- Whether the technique fits the researcher's philosophical and epistemological stance
- Whether the technique answers the research question(s) and objective(s).
- Skills of the researcher.

Both semi-structured and in-depth interviews can answer the research questions in depth owing to the privacy involved. However, I realised that I may not successfully explore the complexity of sexual behaviour without using an interviewer guide. This is because I had so many thematic areas to cover, and using an in-depth interview technique was going to be a "recipe" for forgetting some of the themes. Furthermore, in-depth interviews were going to make it difficult to standardise data collection since there was a possibility that some of the data were to be collected by the female research assistant.

In this study, I chose semi-structured interviews as the data collection technique ahead of both FGDs and in-depth interviews. Besides the potential of semi-structured interviews to explore sexual behaviour and practices among adolescent blood donors in depth, this technique also ensures privacy, making it feasible to probe for detailed responses. This may not be possible in an FGD setting where there is less researcher control, and group dynamics are likely to dictate the interview. For example, some FGD participants can interject other participants, making it difficult to either give detailed responses or to probe for more information (Taylor, 2005).

Semi-structured interviews "attempt to understand themes of the lived everyday world from the participant's own perspectives" (Kvale & Brinkmann, 2009, p. 27). Moreover, data is easy to standardise, analyse and make comparisons across groups of participants. This also eliminates interviewer bias through ensuring that the same information is obtained from all the participants (Patton, 2002). Furthermore, by focussing the interview on the themes that are on the interviewer guide, huge savings on time can be made. In addition, quality data can be ensured since the interviewer guide is a useful tool for training the research assistant. It is close to everyday conversation and is in the middle of a continuum ranging from open-everyday conversation to closed questions in survey questionnaires. An interviewer guide, which is a list of questions that focus the

interview on themes to be asked during the interview, was the tool for collecting data (Kvale & Brinkmann, 2009). It should be noted, however, that if followed religiously, the interviewer guide can "kill" the natural flow of the interview. Nevertheless, with effective training, the natural flow of the interview, which is synonymous with in-depth interviews, can be enjoyed even with semi-structured interviews. I ensured this by being flexible enough to further explore themes within the interviewer guide (Patton, 2002). The idea was to bring the whole interviews closer to natural or everyday conversations.

3.6 Data quality control procedures

Quality data is ensured if quality control procedures are done at every stage. This involved quality control at each of the following stages: before the interview, during the interview and after the interview.

3.6.1 Quality assurance before the interview

The value of preparatory work undertaken before the interview had a significant bearing on the success of the field work. Since rich data was required, an "ambush" approach to the interview was not advisable. The participants had a fair idea of the interview themes based on the information provided to them in the participant information sheet. On the day that I called back the participants, I confirmed with them on aspects such as their availability, proposed venue, time, and permission to use the tape recorder. This also ensured that their social and economic activities were not disrupted (DiCicco-Bloom & Crabtree, 2006). I wore clothes that were consistent with societal norms and values of the participants. The idea was to be like them. In addition, I attempted to relate to them by speaking in local language and slang throughout telephone conversations. Shona was the language used throughout, except in cases where the participants used a mixture of English and Shona.

Before the commencement of the fieldwork, I held a practice interview with the research assistant to gauge the best distance to place the audio tape-recorder from the participant and researcher. I also trained the research assistant before the commencement of fieldwork and after conducting the first interview. This helped me to refine the interviewer guide so as to eliminate ambiguous questions and leading questions that prescribed participants to respond in a particular way.

3.6.2 Day of the interview

In addition to signing the informed consent form and confirming willingness to use the audiotape, the participants helped in inspecting the venue to check whether it ensured that the interviews will not be interrupted. My role was to set up a productive atmosphere of trust, mutual respect and acceptance (Taylor, 2005), and to highlight my expectations to the participant (Silverman, 2004).

3.6.3 The interview process

I conducted the interviews in a quiet park to allow the discussions to proceed undisturbed. I administered semi-structured interviews lasting around 30-45 minutes. An audiotape recorder was the device for recording interview data. In addition, I took some notes during the course of the interview. The one-on-one nature of the interviews enabled me to observe and interpret non-verbal cues such as facial expressions (Patton, 2002).

The early stages of the first interview generally caused both me and the participant to be nervous. I overcame this by using Curtis and Curtis' (2011) suggestion: engaging the participant into some discussions. The first few minutes set the tone for the interview and rapport was crucial. To open the interviews, I asked stimulus background questions (Denscombe, 1998; Silverman, 2004). Examples of background questions are provided in Table 1 on page 43. Qualitative research thrives on the ability of participants to give detailed responses to properly worded and open ended questions (Patton, 2002). The plan was to give the participants space for them to give nuanced descriptions of sexual behaviour and practices among adolescent blood donors, and why they behave the way they do. This encouraged diversity of responses (Kvale & Brinkmann, 2009). I captured such uniqueness since it gave multiple realities of sexual behaviour among adolescents (Taylor, 2005). To augment this, I made sure the interviews proceeded at an appropriate pace to allow for questions to "percolate" into the minds of participants (Denscombe, 1998), with the result that they reflected, recalled and gave thought-out responses.

"An interview is never a dominance-free zone of consensus and empathy; it is an arena characterised by skewed power interactions" (Kvale & Brinkmann, 2009, p. 33). Given that power imbalances are inherent in our everyday conversations, the interview arena is not an exception. Kvale and Brinkmann (2009) posited that power flows from the

researcher who has scientific knowledge and controls the interview. They further argued that if the participants are aware of this, they may not open up during the interview. As a researcher, I acknowledged power imbalances stemming from my social standing relative to that of the adolescent participants, and the epistemological role it can play in influencing the results. I attempted to cede power to participants through encouraging their participation and telling them beforehand that they knew better than me.

When power and control are given to participants, they can tell their story in their own words and style (Taylor, 2005). This encourages spontaneity of the data that is generated. Throughout the interviews, I kept an eye on the audio tape recorder to make sure it was functioning properly.

3.6.3.1 Importance of question structure and format in interviews.

According to Patton (1987), the responses that one gets during an interview are only as good as the questions that initiate them. Good qualitative interview questions are supposed to be neutral, clear and open-ended (Patton, 2002). Because of the open-ended nature of the interview questions, there was a possibility that some questions were not going to be answered correctly. To alleviate this, I re-worded the questions. Moreover, I listened attentively to assess whether the participant was still on track. In some cases, I had to re-phrase the questions. Patton (2002) proposed five categories of questions which formed the guiding framework in this study. These are:

Background questions: These give the characteristics of a participant in relation to the other participants. Examples are age, education, and employment status.

Behaviour questions: These are aimed at identifying what a participant does.

Opinion questions: These target cognitive faculties of what a participant thinks should be done. These are different from **knowledge questions** which target factual information obtained from institutions of socialisation such as media and schools.

Sensory questions: These target sensory apparatus: eyes, nose and ears.

Table 1: Interview theme matrix for adolescent blood donors

Question category	Examples of questions
Background questions	<ul style="list-style-type: none"> Please may you tell me about yourself. Age, period as a donor, place of residency, family structure
Knowledge questions	<ul style="list-style-type: none"> May you please describe the various ways in which HIV infection can be transmitted?
Behaviour questions	<ul style="list-style-type: none"> Which sexual behaviour is/are practised by most adolescent donors? What are you doing to protect yourself against STIs?
Opinion questions	<ul style="list-style-type: none"> What could be the reasons for current sexual behaviour among adolescent blood donors? HIV is reported to be higher among female adolescents as compared to their male counterparts. What could be the reason for this? You mentioned that.....forces adolescents into the observed sexual behaviour. What could be done to address this? By adolescents themselves? By their peers? By policy makers?
Sensory questions	<ul style="list-style-type: none"> We are at SIMMAD, describe to me what is happening. What are you seeing, hearing, and smelling.

Adapted from: Patton (2002).

To mimic a natural conversation during the interview, I used my practical interview skills learned from the integrative research lectures. This gave me confidence in establishing rapport at the beginning and to ask quality questions. To further explore the interview themes within the interviewer guide, I used probes. Probes are follow up questions aimed at getting detailed information as well as the degree of detail to be provided by the participant (Patton, 2002; Rubin & Rubin, 2005).

(i) **Detail-focused probes** such as who, what, where, and how?

(ii) **Elaborative probes** are aimed at encouraging the participant to either explain the issue further or signal that the participant is on track. For example nodding the head to encourage participants to keep on talking. I used an elaborative probe "he wears down your innocence" to get an in-depth explanation of why condoms may not be used in sexual encounters between female adolescents and older men.

Doreen: Or at first.....you would use a condom, then after a while, when you are used to each other, he will then say "let's us get rid of condoms"....He gradually wears down your innocence.....

Collins: He wears down your innocence.....

Doreen: Yes. It's like a drug... The process is gradual.

(iii) **Contrast probes:** These give the demarcations between two groups. For example, "how does condom use among male adolescent donors compare with that of their counterparts?"

I made sure that I asked the sensitive questions when the interview was progressing well and the participant was at ease. To reduce bias in responses, I asked presupposition questions (Patton, 2002). This question presupposes that the participants were already doing something to avoid contracting HIV. In response, the participants described the activities they were doing although they also had an option to object. The following is an example of a presupposition question and the response provided.

Collins: What are you doing to protect yourself against STIs?

Kudzai: I said to myself I won't yield to [premarital] sex. Because sex will always be there, even in old age. It doesn't deplete.

I also combined both elaborative and detail focussed probes to get detailed responses on why condoms may not be used in age-unbalanced sexual relations.

Collins: What if the young girl insists on using a condom? **Detail focused probe.**

Robert...she is still immature; the sugar daddy is old and experienced. In addition, the sugar daddy³ caresses her so strongly that she cannot respond or talk. She will not get any chance to say anything 'coz of what the sugar daddy will be doing to her.

Collins: 'coz of what the sugar daddy will be doing to her...**elaborative.**

Robert: 'coz of what the sugar daddy will be doing to her.....

Collins: She can't talk..... **elaborative.**

Robert: The way the sugar daddy will be romancing [caressing] her is out of this world. She won't get the chance to say... [Laughs]. Then she gives in.

I asked all the questions with data analysis in mind. My aim was to get rich detail rather than superficial responses which make data analysis and interpretation difficult (Bazeley, 2009). Thus, in addition to probes, I also obtained richer-detail by taking careful consideration to the wording of questions. I avoided dichotomous questions like "Do you think condoms are effective in reducing HIV?" These may have limited

³ a man who has sexual relationships with adolescents who are young enough to be his children.

responses to either "Yes" or "No" to such an extent that the whole interview was going to degenerate into quiz sessions that disturb the natural flow of the conversation (Curtis & Curtis, 2011). After careful thought, I reworded the question to read "What is your opinion about condoms as a way of reducing HIV infection?"

Curtis and Curtis (2011) advise us to maintain rapport by letting the participants know that they are still on track. For example, I would say:

We are almost through with our interview. It's ok with me. How is it going for you?

Adherence to the data collection procedure was enhanced by use of a checklist. This ensured that I carried out the entire pre-interview, interview and post interview procedures in a systematic manner.

3.7 Validity tests to reduce bias in responses.

In this study, I did not take every response at face value. I tried to reduce social desirability bias in responses. I validated the responses when abstinence was stated well before I asked about a participant's sexual behaviour.

But as of now, I will be celibate until I get married. That is how it has been for the past 20 years-**Doreen, FA**⁴.

One male adolescent inadvertently mentioned about abstinence when responding to the question "*If you were to buy condoms, how comfortable were you to get them?*"

Anyway, coz I have never done it [sex]. In pharmacies especially by the tills to cater for those who are shy to buy them-**Bradly, MA**.

Some adolescent participants distanced themselves from their peers who get involved in activities that pose a risk to HIV infection by use of pronoun "they".

Blood donors...some of the things they do? For some, it's obvious they sleep with young women...But there is a day when they are stopped from donating [blood]...the disease [HIV] would have been detected...-**Robert, MA**.

If you go there you will come across very young people. The way they will be dressed and dancing is very seductive. That's what they want...they get drunk with alcohol....the boyfriends sleep with them. That's some of the things happening to those youngsters-**Robert, MA**.

⁴ **MA**-Male adolescent; **FA**-Female adolescent

Bias was exposed when participants contradicted themselves when talking about their sexual behaviour on condom use.

I am past the stage of practising abstinence because I am a bit grown up. I stick to one partner. I have been tested together with my partner, but the results are confidential-**Tendekai, MA.**

However, his response to the question on whether he uses condoms during sexual encounters exposed bias since by trying to evade the question, he contradicted himself.

U-umn! Protection is not guaranteed; you may face some challenges when using protection. They can burst if you use Protector Plus⁵...However, we have not reached that stage. We only managed to get tested -**Tendekai, MA.**

Validity of findings was also enhanced by collecting data from both adolescent participants and key informants. This is a way of triangulating data to reduce bias (Grbich, 2013).

It should be emphasised that if data security measures are not put in place, even if good data are obtained, it may get either get lost or get tampered with. Ethical issues may ensue. I describe the measures that I put in place to ensure the security of data.

3.8 Data security

During data collection, I kept all the tape recordings and interview notes in a lockable metal cabinet accessible only to me. The metal cabinet was located at NBSZ offices. I transcribed most of audio-recordings into Shona Word text within 48 hours of data collection. I stored the soft copies for the Shona transcripts in password protected folders on flash discs/compact disc and on my personal laptop. After field work, I stored the soft copies on a computer at AUT University. After data analysis, hard copies of interview transcripts in Microsoft Word, informed consent sheets and participant information sheets will be stored for 10 years before they are shredded.

3.9 Conclusion

In this chapter I have described all the steps I took (research designs, selection of study participants and right application of data collection techniques) to ensure I collected rich data to answer the research questions. In the next chapter, I am going to describe how I analysed the data.

⁵ A brand of condoms

Chapter 4: Data Analysis

4.1 Introduction

In the previous chapter I devoted much attention on how I got detailed responses. This was envisaged to ease data analysis since identification and naming of themes becomes easy (Bazeley, 2009). In this chapter I start by selecting the method for the analysis of data and move on to the step by step description of how I analysed the data.

4.2 Choice of data analysis method

There are many methods for analysing qualitative data. These are: discourse analysis, content analysis and thematic analysis. In this study, I chose thematic analysis. Thematic analysis is a method for identifying, reporting and analysing themes within data (Braun & Clarke, 2006). It is easy to grasp and to generate new findings. This is important since little is known about sexual behaviour among adolescent blood donors. Moreover, thematic analysis makes it easier to make comparisons of sexual behaviour between male adolescents and their female counterparts.

Unlike quantitative data in which analysis starts when data has been collected, in this study, I started checking data for their potential to answer research questions during fieldwork. I analysed every response from the participant in order to come up with follow up probing questions.

4.3 Stages in thematic analysis

I followed Braun and Clarke's (2006) step by step guide for thematic analysis.

4.3.1 Stage 1: Familiarisation with the data

Initially, I transcribed all the Shona audio recordings into Word text. Braun and Clarke (2006) define transcription as the process whereby data from an audio recording is put on paper. They caution us against viewing this as a mechanical process. I took heed to their caution and viewed transcription as the best way to "soak" myself with the data. As it turned out, transcription was the foundation for the rest of my data analysis (Braun & Clarke, 2006). After transcribing all the audio recordings, I translated them from Shona to English MS Word. Later, I read the English transcripts several times while listening to Shona audio recordings to check that the original meaning was not lost.

4.3.2 Stage 2: Generating initial codes.

Codes are aspects of the data that are interesting to the researcher (Braun & Clarke, 2006). According to Gibbs (2007), codes are either data driven in which themes depend on data or are concept/theory driven, in which themes depend on specific research questions. Whereas the former is an inductive/bottom-up approach to coding, the latter is deductive/top-down/analyst driven, and is informed by: the literature review, theoretical framework, and research questions (Braun & Clarke, 2006; Gibbs, 2007; Grbich, 2013). Concept driven coding works well when the responses are not superficial (Bazeley, 2009). This suited this study since I collected detailed data which sought to formulate theory. It is worth restating the research question(s) for this study:

- What are the sexual behaviour and practices among adolescent donors in Harare and Masvingo provinces, Zimbabwe?
- What are the contextual factors that shape and propagate such behaviour?

I formulated a codebook depicted in Table 3 on page 51. This formed the basis for identifying the codes within the transcripts. I amended the list of codes during the analysis. I categorised data both manually and electronically using *NVivo* 10 software (QSR International, 2013).

The reason behind coding was to identify features of the data that could answer the research question and objectives. I coded the text inclusively—including the surrounding text in order to retain the context surrounding the data (Braun & Clarke, 2006). For this reason, I used both Grbich's (2013) and Gibbs' (2007) criteria for coding. They advise us to look for the following when coding: repeated words; *vivo* words which are used by participants to convey meaning, for example, "applying the brakes"; activities; behaviour of what was said or done; key words in context and metaphors, for example, "sex is a game". Obviously this demanded a thorough understanding of the data set on my part. However, this was not a challenge since I had an in-depth understanding of the data owing to the role I played as an interviewer, transcriber and translator.

Initially, I identified the codes at the descriptive level. Later, I upgraded the descriptive codes to semantic/analytical codes, which are beyond what the participants said (Gibbs, 2007). For example, in the excerpt below, the descriptive code "I apply the brakes" was interpreted at semantic level as "I control my sexual desire". Table 2 below depicts how I carried out manual coding.

Table 2: Schema of how the coding process unfolded.

<p>Collins: What if the young girl insists on using a condom?</p> <p>Robert: A-ah, her understanding is limited....she is still immature; the sugar daddy is old and experienced. In addition, the sugar daddy caresses her to such an extent that she cannot do anything. She will not get any chance to say anything 'coz of what the sugar daddy will be doing to her.</p>	<p>Contrast: Girl is passive, & inexperienced; sugar-daddy is active and sexually experienced. Power imbalances.</p>
<p>Collins: 'coz of what the sugar daddy will be doing to her....</p> <p>Robert: 'coz of the way he will be romancing [caressing] her.</p>	<p>Sugar daddy is active Young woman is passive</p>
<p>Collins: She can't say anything...</p> <p>Robert: The way the sugar daddy will be romancing [caressing] her is out of this world. She won't get the chance to say.....[laughs], then she gives in.</p>	<p>Passive, lack of control over sex. Caressing as subtle tool to get (unprotected) sex, resignation/powerlessness</p>
<p>Collins: Why is HIV higher among female donors than among males?</p> <p>Robert: Like I said earlier on, female adolescents are after material things as compared to male adolescents. A greater population of female adolescents indulges in early sex as compared to male adolescents. The disease [HIV] will be spreading. Because if one sleeps with men at the age of 14, she continues to have sex. The probability of getting infected with the disease is higher among female adolescents because they are sexually active for a very long time..... [Pause]. Male adolescents may sleep with women at a later age and when they want to have sex. For example, I do not want to have sex [with my girlfriend]. Umn...as long as female adolescent has a boyfriend, there are high chances for her to have sex. Because when he comes to her, he starts to caress her and they end up having sex. I can romance[caress] [my girlfriend] until I reach a point whereby I can restrain myself coz I don't want to have sex and am also not foolish.</p>	<p>Females: Love material things Early sex Long sex lives</p> <p>Male adolescents: delay sex control over sex lives caressing tool for sex abstinence from sex</p>
<p>Collins: What makes her accept the decision by the young man?</p> <p>Robert: A girl? Initially she might object to sex but the way she will be [caressed] romanced, ha-ah [laughs], she will get weak and leave everything to the young man. She ends up having sex with her boyfriend. But I can put some limits. When the romance gets "hot", then I "apply the brakes". I "apply the brakes" otherwise I get infected.</p>	<p>Powerlessness, lack of control over sex life Concealed rape Caressing -tool for getting sex Abstinence- fear of HIV</p>

4.3.3 Stage 3: Searching for potential themes

As the title suggests, this stage involved my active role in identifying and sorting all the codes into broader themes. Bazeley (2009) uses the terms "concept" to refer to semantic/latent themes and "category" to those at descriptive level. A unique identifier for each participant was attached at the end of each descriptive coding extract as shown in Figure 5 below. Initially, I grouped the related codes under different sub-headings.

The sub-headings were informed by the interviewer guide and information that emerged from the interviews. The outcome was 27 themes. In addition, I came up with a miscellaneous folder to "house" those coding extracts that did not seem belong to any group (Braun & Clarke, 2006).

Braun and Clarke (2006) caution us that there is no hard and fast answer as to what proportion of codes constitutes a theme. Thus, unlike in quantitative data, an increased prevalence does not mean that a theme is crucial and vice versa. My judgement and flexibility were crucial. I selected themes on the basis of their potential to answer the research questions. The procedure was recursive and non-linear, involving moving back and forth within the raw data (Braun & Clarke, 2006). The outcome was candidate themes.

Table 3: Codebook for manual coding

Individual sexual behaviour	Condom use	Contextual factors	Condoms: availability and accessibility
<ul style="list-style-type: none"> ○ Unprotected sex ○ Age mixing ○ Unbalanced relationships ○ Sexual feelings ○ Multiple concurrent partnerships ○ Experimenting ○ Early sex ○ Delayed sex ○ Hooking up/casual sex ○ Carrying condoms ○ Unplanned sex ○ Alternatives to vaginal sex ○ Freedom to have sex ○ Desire to infect others ○ Abstinence/virginity ○ Strong desire for sex ○ Knowledge about partner HIV status 	<ul style="list-style-type: none"> ○ Pleasure ○ Trust ○ Enjoyment ○ Desire to be pregnant ○ Misconception about HIV ○ Power imbalances in sexual relationships ○ Lack of knowledge ○ condom use is like masturbation ○ Desire to prevent pregnancy ○ No protection ○ Fear of HIV ○ Dislike for condoms ○ Nature and duration of partnerships 	<ul style="list-style-type: none"> ○ Love for money ○ Love for material things ○ Peer pressure ○ Pornography ○ Unfriendly reproductive health services ○ Religion ○ Place of residency ○ Rape/ Forced sex ○ culture ○ Economic deprivation ○ Technology-internet ○ Changing times ○ Entertainment ○ Social, physical environment ○ Affection ○ Avenues ○ Partying 	<ul style="list-style-type: none"> Shy to get condoms from shops No questions asked in clinics No time to get condoms

CSW-commercial sex work, Avenues-an area in Harare where CSW is rampant; the area is synonymous with CSW.

Sorting codes-Collins Timire MPH thesis - Microsoft Word						
Table Tools						
Home Insert Page Layout References Mailings Review View EndNote X4 Design Layout						
1 2 3 4 5 6 7 8 9						
Unprotected sex	Age mixing	Economic deprivation	Partying	Condom use/why condoms may not be used	Peer pressure	
Most young people have unprotected sex during functions. Bradly-am001	She comes to these young men and spreads again. Bradly-am001 .	Sometimes financial problems lead to those things Bradly-am001.	...they would be drunk and wasted Bradly-am001	....young men say they may not have time to look for a condom Bradly-am001 , but I think maybe, they use protection robert002 .	peer pressure in schools, yah there is a lot of peer pressure Bradly-am001 .	
...young people end up having unprotected sex Bradly-am001 .	A young woman has got a boyfriend of her age but she looks for a sugar daddy. Bradly-am001	in the Avenues area, ....most of them are of school children trying to raise their school fees Bradly-am001 .	The dressing and the dancing will be seductive. That's what they want robert002 .	As long as they are blood donors, we trust that they are not yet infected robert002	You see your friend doing well because s/he in a relationship [sexual] with a sugar daddy, you end up having a sugar daddy Bradly-am001 .	
The guy mostly wants to do it without a condom Bradly-am001 .	Similarly, young man can have a sugar mummy elsewhere but when he comes to her girlfriend, they can have sex Bradly-am001 .	female adolescents have a great appetite for food most of which may not be available at home so she decides robert002	getting drunk with alcohol robert002 ...leave SIMMAD and look for a place where they will have sex robert002 .	Can a young girl infect me? I will not use a condom" robert002	boys say she will be gone by the time you come back. Bradly-am001	
Most of them go to sugar daddies; they ....will tell the young men that a condom is not important, you see Bradly-am001 .	She will still be in love with him robert002	let's say someone lost both parents, yet they like to continue with their education Bradly-am001 .	The environment there is different from this outer environment kudzai-003 .	her understanding is limited...she is still immature; the sugar daddy is old and is experienced robert2 .	see their friends with latest phones and they have none, She decides to have a boyfriend robert002	
He will then have unprotected sex with her robert002	They are different robert002 age groups	let's say someone lost both parents, yet they like to continue with their education Bradly-am001 .	Nobody restrains you on what you will be doing <i>freedom</i> enjoy themselves to the extremes. <i>let loose</i> all your friends are dancing with their girlfriends kudzai-003 .	the sugar daddy does complicated things on her....she cannot respond or talk robert002 .	Since her sister will be having a boyfriend, she decides to have one robert002 .	
...a young man has got the freedom to have unprotected sex kudzai-003 .	Reason for keeping a young man	...trying to earn a living out of it. Bradly-am001 .	they stimulate hormones kudzai-003 . some will be folicating during those dances kudzai-003.	...afraid girlfriend may change mind Bradly-am001	It is at school where they change their behaviour robert002 .	
you are caught in the moment, it would happen D-06 .	For show-off to friends like at school or in town, Bradly-am001.	...up selling your body so that you can meet your needs Trisha-10 .	sweetie let's go to a lodge kudzai-003 .	They say if you use condoms, you won't be doing anything kudzai-003 . is like masturbating robert002	my friend/somebody has got a nice watch, so I also need mine Trisha-10 .	
some men don't want to use a condom Peter-05 .	She may not leave her kudzai-003 .	novartis		old men hate protection [condoms] Bradly-am001 .	peer would tell you that you can't maintain your virginity until 20 years kudzai-003 .	
...prepared to pay more money for having unprotected sex Peter-05 .	their love will be depleting kudzai-003.			...dampens pleasure robert002	Oh my gosh you are still a virgin?" D-06 .	
...I don't think condoms are used Edie-4 .	The young man is for genuine love, the other one is for "help me and I help you D-06 .			Some of them say....they say it's not pleasurable so they prefer direct sex Bradly-am001 .		
				At times sex is started in a situation where there are no condoms Bradly-am001 .		

Figure 5: Categorising data using the manual method.

4.3.4 Stage 4: Reviewing potential themes

I realised that some of the themes, for example unbalanced sex and age mixing were related. Moreover, some themes were not themes *per se*, but were sub-themes for major themes. At this stage I used Patton's (1987, 2002) criteria for collapsing related themes into one common theme: internal homogeneity (agreement among themes) and external heterogeneity. After this procedure, I was left with eight major themes that I used to formulate the thematic map described in Figure 6 on page 54.

4.3.5 Stage 5: Defining and naming themes

I named themes on the basis of the aspects of data they capture (Braun & Clarke, 2006).

4.3.6 Stage 6: Report writing.

This will be explored in both the results and discussion chapter.

4.4 Conclusion

In this chapter I covered the stages 1-5. I identified major themes as follows: mother to child transmission of HIV, partying, economic deprivation, pornography, place of residence, peer pressure, abstinence, and individual behaviour. The sixth stage will be covered in the next chapters. In the next chapter, I am going to present the results.

Chapter 5: Results

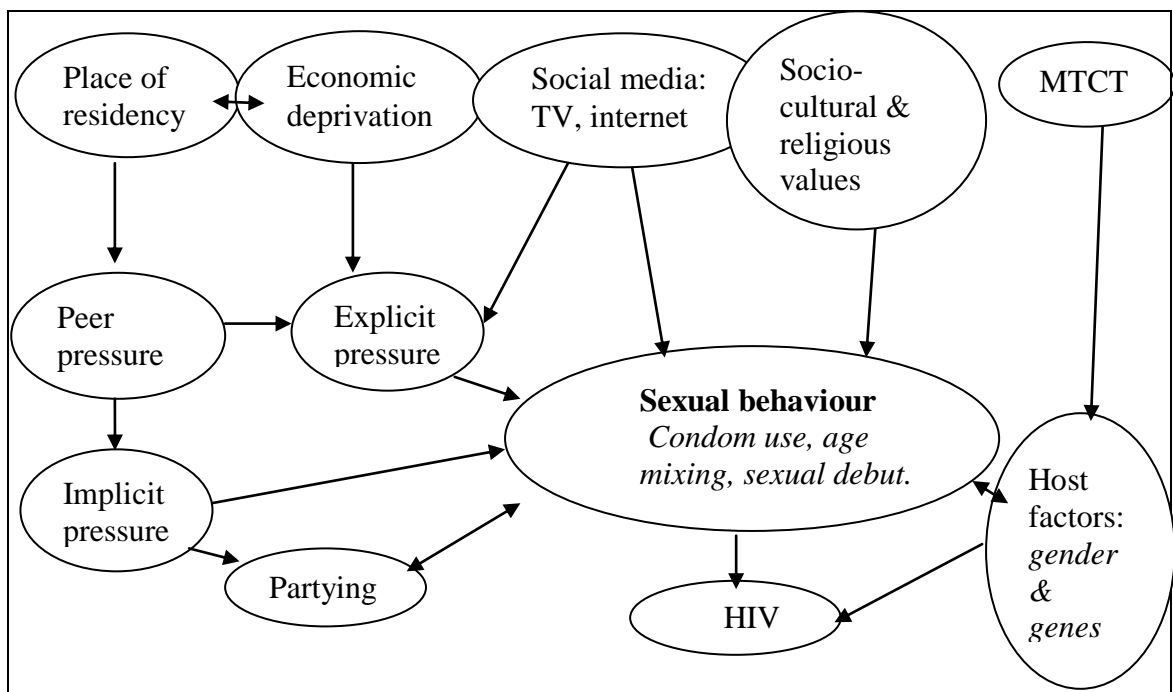
5.1 Introduction

This chapter comprises three sections. In the first section, I present the thematic map for the themes that were identified. In the second section, I describe the study participants and the context as described by the participants. The third section will focus on sexual behaviour among adolescent participants. I am going to use Bazeley's (2009) Describe-Compare-Relate approach to describe and compare the responses from adolescent participants with those from the key informants. I will also compare results by sex and category of participants. For brevity, I am going to link the responses to the participants through use of the following acronyms: **FA**-female adolescent, **MA**-male adolescent, **MKI**-male key informant and **FKI**-female key informant.

Section A

Figure 6 below presents the thematic map for both contextual and sexual behaviour factors.

Figure 6: Overview of themes



MTCT-Mother to child transmission of HIV infection.

It is apparent that peer pressure plays a pivotal role in linking contextual factors and sexual behaviour.

5.2 Demographic characteristics of the study population

A total of fourteen participants took part in this study. They fall into two groups: adolescent blood donors (n=10), and key informants (n=4). Their demographic characteristics are given in both Table 4 and Table 5 below.

Table 4: Demographic characteristics of adolescent blood donors

Name*	Sex	Donations given	Donor status	Age	Place of residency	Family structure.	Education
Robert	M	10	Regular donor	19	Harare, HDS	Paternal orphan. Stays with his mom brothers. Elder brother is employed.	FHS. Unemployed
Bradley	M	10	Regular donor	18	Harare, HDS	Double orphan. Stays with his aunt and four siblings	FHS. Unemployed
Kudzai	M	04	Regular donor	19	Harare, HDS	Non-orphan. Stays with his mom and young sibling; father moved out.	HSS
Doreen	F	06	Regular donor	20	Harare, LDS	Paternal orphan, and stays with her mother and maternal grandmother.	TS
Thomas	M	19	Regular donor	20	Harare, HDS	Non-orphan. Stays alone in the city. Parents live in rural areas	FHS, Employed
Tendekai	M	05	Regular donor	20	Harare, MDS	Non-orphan. Stays with his father. Mother usually stays in rural areas	FHS. Unemployed
Trisha	F	01	New donor	18	Harare, HDS	Non-orphan. Stays with paternal grandparents. Parents are divorced.	HSS
Michella	F	02	Regular donor	20	Masvingo, HDS	Non-orphan. Stays with mum and dad	TS
Ritchie	M	03	Regular donor	20	Masvingo, HDS	Non-orphan. Stays alone during school terms, parents live in a different city.	TS
Jayden	F	11	Regular donor	20	Masvingo, MDS	Non-orphan. Lives with mum and dad	HSS

pseudo-names provided by the participants. **HDS-High density suburb, **MDS**-Medium density suburb, **LDS**-Low density suburb. **TS**-Tertiary student, **FHS**-Finished high school, **HSS**-High school student. These are my own acronyms to ensure brevity.*

As can be seen from the table above, most adolescent participants were regular donors and were from high density suburbs. Age was defined as number of years at last birthday. The average age for adolescent blood donors was 19.4 years. The range was two years (18-20) years. All the adolescent participants identified themselves as Christians. Three of the 10 adolescent participants were orphaned,

with only one of them having lost a mother. Lack of paternal support was mentioned by six adolescent participants. Only one of the six male adolescent participants was still in high school.

Three of the female adolescents were aged 20, and one was younger (18). Two of the female adolescent participants were doing tertiary studies; the other two were still in high school.

Table 5: Demographic characteristics of the key informants.

Name*	Province	Work experience and profession	Scope of work
Peter	Harare	Five years' experience in the health sector as an HIV counsellor. Former high school teacher.	Works in HIV and Tuberculosis (TB) programmes within the health sector. Interacts with people of all age groups.
Edie	Harare	Five years' experience as a Registered General Nurse (RGN).	Working as a community nurse/ midwife. Interacts mainly with female adolescents
Sr. Ranga	Masvingo	Has got more than 27 years of work experience as an RGN, fifteen of those were in a Youth Friendly Reproductive Health care setting.	Works as an NBSZ counselling partner. Offers treatment and counselling services to tertiary students.
Chiedza	Harare	Two years' experience as an NBSZ counselling partner. Five years' experience as an RGN.	Interacts with blood donors of all age categories through working as an NBSZ counselling partner, as well as people in the general population through working in Voluntary, Counselling and Testing programmes (VCT).

* Pseudo name provided by the participant, **RGN**-Registered General Nurse

Three females and one male constituted the key informants who took part in the study. Two nurses had dual roles as National Blood Service Zimbabwe counselling partners and community nurses. The level of experience varied among the key informants but their scope of work enabled them to interact with adolescents.

Section B

5.3 Description of the adolescent donors' socio-economic and physical context.

This description seeks to provide a participant provided picture of the context in which adolescent donors live. Participants highlighted the role played by the socio-economic as well as physical factors in shaping sexual behaviour among adolescent donors. Common themes that were identified were living in high density suburbs, pornography, economic challenges and partying.

5.3.1 High density and poor housing shape risky sexual behaviour

Most adolescent donors were reported to stay in high density suburbs (see Table 4 on page 55). These places are characterised by high population density.

Because in high density areas, houses are densely packed, they are very close to each other. In the high density areas, you will be able to see almost every person on a daily basis, and you end up proposing love to a young girl even though you may not have wanted to-**Robert, MA.**

They explained that peri-urban areas have even poorer housing which may expose adolescents to early sex.

The main precipitating factor is the living environment. This area is too crowded. Most [adolescents] stay with their parents in two roomed houses; a curtain is used to partition the rooms. Young people end up taking to what their parents will be doing since there will be no privacy. This exposes young people to sex-**Edie, FKI.**

So, as well as being in close proximity to neighbours, in the home too, the key informants reported that adolescents may sometimes be at risk of acquiring HIV infection from close family members.

... Sometimes their guardians sexually abuse them because they don't have anywhere to go. So they are raped by people whom they know, people whom they live with-**Peter, MKI.**

By contrast, in low density suburbs, rate of sexual activity was reported to be low. This was attributed to a lower rate of physical human contact.

.....in the low density suburbs, people do not see each other quite often. So the rate of sexual activities is low. Low rate-**Robert, MA.**

5.3.2 School social environment shapes behaviour among adolescents

For those adolescents attending school, their place of residency was reported to have an insignificant role. This is because adolescents from both low and high density suburbs meet at schools. That is where adolescents share their experiences and risk exposing each other to drugs and pornography.

5.3.3 High rate of pornographic material on the streets.

The participants reported that most of the items sold by informal trade (street markets) are pornographic material. Some adolescent participants highlighted some of the unethical strategies being used to increase sales of such material.

Street vendors may put a title for a movie like Wrong Turn which they know is loved by many people. When people buy the DVD and later on find out that it's the wrong one, they end up watching it anyway-**Bradley, MA.**

Smart-phones were reported to have become the easiest means to expose adolescents to pornography.

Some download the pornographic material from the internet. They keep some stuff in their phones so that they can watch it whenever they want to-**Kudzai, MA.**

In so doing one key informant believed that they may become sexually aroused and may want to practise what they would have watched from the movies.

I see that a lot of people have exposure to technology and they have access to smart-phones that are available nowadays. They can browse the internet. This makes it easier for them to access pornographic material. Moreover, they may want to experiment whatever they would have seen-**Peter, MKI.**

5.3.4 Economic challenges faced by adolescent donors in tertiary institutions

In tertiary institutions students were reported to face numerous challenges. The major challenges reported were economic in nature and stemmed from tertiary fees, rent and food. Participants highlighted the challenges faced by students from poor backgrounds, especially the orphaned.

I observed that they face economic hardships...Then there are some who have accommodation challenges. Most institutions of higher learning in this country don't have enough accommodation for their students. They [students] will be renting in neighbouring suburbs; their parents may be

staying in rural areas or in a different city. ...The area they choose to stay in may shape their sexual behaviour. They may live in an area where promiscuity is rife-**Sr. Ranga, FKI.**

Without enough money for their upkeep and to buy learning material, one respondent reported that students may be forced to spend money initially meant for their food and rent. When the rent is due, they may look for alternative ways to get it.

It will be difficult to go back to parents to ask for the money, and they end up looking for other means to bridge that financial gap. That's when they end up having old people to sponsor them with money for food and rent. These people are old enough to be their mothers, fathers and even grandfathers. The old people will be after sexual entertainment from these adolescents-**Sr. Ranga, FKI.**

Apart from accommodation, food is another challenge that was reported. Female students were the group most likely to be affected by a lack of money for food. They were reported to sell their bodies for a meal in order to survive life on the campus.

The male adolescents can afford to live on a single meal per day after sacrificing a dollar [\$US1] for sex with female students-**Ritchie, MA.**

Besides food and accommodation challenges, female adolescents in tertiary institutions were reported to face yet another challenge in the form of sexual pressure from male lecturers. Sexual favours were reported as a guarantee for one to get a pass mark. On the contrary, male students were reported to provide monetary incentives.

One had to [entice] provide sir [the lecturer] with whatever he wanted in order to get a high mark of at least 80% during course work since the final exam is usually extremely difficult-**Michella, FA.**

5.3.5 Partying

Figure 7 below depicts the events that were reported to unfold during nocturnal parties. It is clear that freedom at parties is the nexus for all these activities. Moreover, it is apparent that casual sex is mainly promoted by freedom at parties.

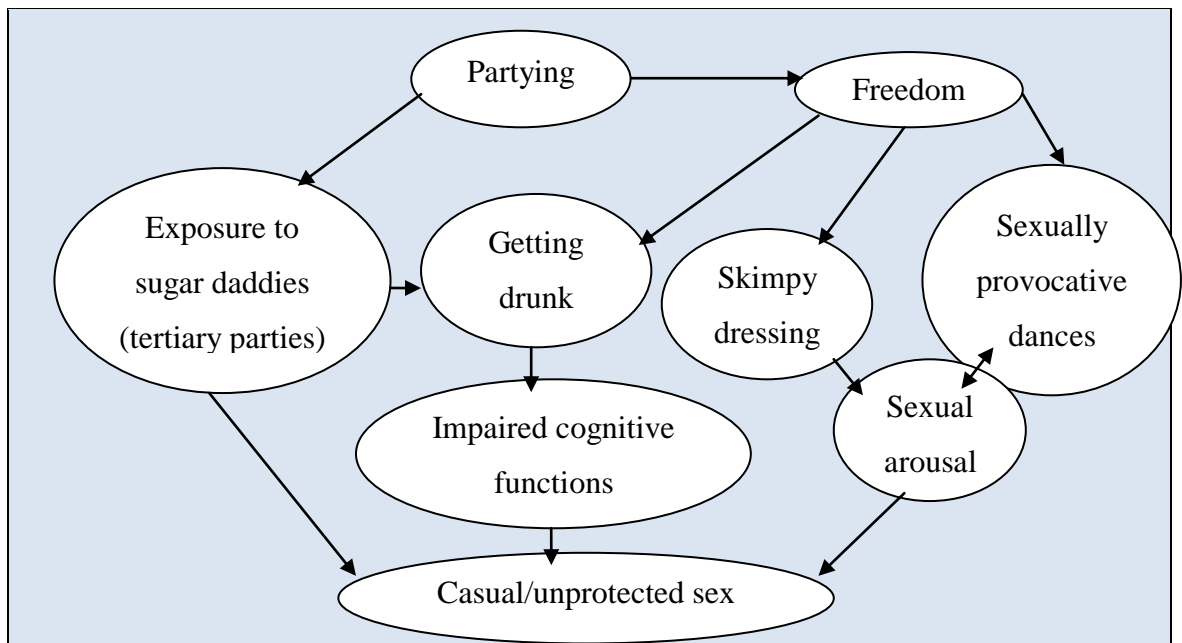


Figure 7: Thematic map for nocturnal parties

Adolescent blood donors reported that a lot of nocturnal parties are organised for them. Those in Harare province reported a major nocturnal party called SIMMAD. This is held during the August holidays. However, those in tertiary institutions reported that parties were not limited to the holiday period; they are conducted religiously.

Friday evening is the official party day-**Doreen, FA.**

If we look at what happens in most colleges and universities, they hold periodic parties for example, every Friday-**Ritchie, MA.**

It was clear that some of the adolescent participants had attended parties of a similar nature. They pointed out that they momentarily forget about the risk of contracting HIV infection during such functions.

I still remember from my high school, they [adolescent blood donors] go to such places [parties]. I think when you are in high school, the understanding that you are a blood donor and people value your blood dawns upon you when that truck [NBSZ mobile team truck] arrives at your school. Apart from that, joy and entertainment will be too much for us. It's like thinking about an infection [HIV] when you are at a party, you know-**Doreen, FA.**

It was apparent that the key informants did not know about these nocturnal parties. They professed ignorance about the existence of such parties. According to the adolescent participants, the social environment and activities at nocturnal parties are meant for young people.

Adolescents comprise the highest percentage. Old people feel awkward if they go there because there will be a lot of youngsters.....it's dark and there is loud music. If you know marijuana, you can probably smell it....People are skimpy-**Doreen, FA.**

If you go there you will come across very young age groups. The way they will be dressed and dancing is very seductive-**Robert, MA.**

Moreover, adolescent participants highlighted that party organisers create a conducive environment for adolescents through ensuring there are no regulations governing the code of behaviour, age restrictions and consumption of liquor and marijuana by the adolescents. They viewed this as freedom which was encapsulated as follows:

The environment there is different from this outer environment. Nobody restraints you on what you will be doing 'coz everybody has the intention to enjoy themselves. So they enjoy themselves to the extremes-**Kudzai, MA.**

Enjoyment was reported to be in the form of dances which "trigger" sexual feelings. These parties were described as opportunities for young men in particular to seek opportunities for casual sex. Casual sex was attributed to a strong sexual desire.

When dancing with the girls, some get to the extremes. In the process they stimulate hormones. The boyfriend ends up saying, "We cannot continue like this [dancing]. It's impossible; we have to have sex." Some will be fornicating during those dances. Some would say, "sweetie let's go to a lodge or to our house." They end up having sex in the process. They would have seen each other only at SIMMAD [party]. The sexual encounter may be limited to that time alone-**Kudzai, MA.**

They will then leave SIMMAD and look for a place where they will have sex-**Robert, MA.**

People would be involved in sexual activities there [at the party] or they would hook up and go somewhere else; even with people they would have met there for the first time-**Doreen, FA.**

By contrast, some attributed casual sex to impairment of cognitive functions.

Some relationships are automatic like people would have seen each other at the party and they enter into sexual relationships. They would be drunk and wasted you see-**Bradley, MA.**

Adolescents who go to such parties were reported to be more likely to have unprotected sex even with people whose HIV status they do not know.

In most cases, young men say they may not have time to look for a condom, lest the young woman would object [to sex]. I heard someone saying that-
Bradley, MA.

Sugar daddies were reported to frequent parties, especially those conducted at tertiary institutions. They use their money to lure female students from young men. They lure them with food and drinks before they go to have sex with them.

When the party is over, some [female students] don't come back to Uni. We don't know where the sugar daddies take them to-**Ritchie, MA.**

5.4 Sexual behaviour among adolescent blood donors.

In the previous section, I described the context in which adolescent blood donors live. In this section, I describe adolescent blood donor sexual behaviour as described by the respondents with respect to four key themes that were raised during the interviews. These are availability and accessibility of condoms, risk perception of HIV infection, knowledge of HIV transmission modes and practical skills on condom use.

5.4.1 Availability and accessibility of condoms to adolescent blood donors

All the adolescent participants and key informants reported that condoms were readily available.

They are everywhere, in the bathrooms, in the toilets and in the changing rooms, even in clinics-**Doreen, FA.**

There was a convergence of responses on condom accessibility by adolescents especially from health institutions such as clinics and hospitals. The participants concurred that in clinics and hospitals, condoms are stocked in places where adolescents may access them freely.

For example, in my community there are clinics. You just get in, and grab a pack; you don't speak with anyone and you leave-**Robert, MA.**

In institutions such as clinics and hospitals the key informants recognised the need for adolescents to maintain privacy about their purchase of condoms. The key informants reported they had gone out of their way to put condoms in places where they could be easily accessed, as not everyone would be comfortable in accessing them. Moreover the

one-on-one nature of conversations between community worker/healthcare worker and client in these institutions was reported to enhance condom uptake.

So the strategic positions I am talking about are the places they frequently visit such as public toilets. If they are in health centres such as the reception area, some are afraid of asking or getting them from the reception area. Having realised this, we made sure that we remove these barriers by stocking condoms in strategic places: we stock some in the reception. During weekends we stock some outside [the students' clinic]. We make sure condoms are stocked in the toilets everyday-**Sr. Ranga, FKI**.

But in clinics and hospitals, you can pretend to be going for a consultation visit and when you get into the [consultation] room, and there are two of you, you can ask for the condoms and they will give you-**Kudzai, MA**.

There was dissent on the aspect of accessibility of condoms especially from supermarkets and shops. In these places condoms are stocked around the till area. Adolescent blood donors were reported to be shy to buy condoms in full view of people.

If they get them from supermarkets I think only a few of them would do that because they don't want to be seen. The moment they are seen, they start to think what the people would be saying about them-**Sr.Ranga, FKI**.

Responses from adolescent donors underlie their desire to keep their sex lives secret.

You look at people's faces and say to yourself, "these people certainly know that I am going to have sex with a man today [laughs]...coz' that that's the only use a condom was designed for. The only instance it is used is when one sleeps with a person"- **Michella, FA**.

So everybody will know that you want to use the condom; you want to have sex. So people [adolescents] will end up not buying condoms-**Kudzai, MA**.

The shop environment was reported to fuel gossip and speculation from other shoppers who may have a personal relationship with the adolescents.

They would know I am going to use them. My dignity is undermined. In the shop, there may be friends and relatives. They may exaggerate the whole thing. They may go on to the extent of telling people that they saw me picking condoms, and I used them-**Jayden, FA**.

The key informants highlighted the role played by contextual factors such as societal norms in reducing condom uptake from shops by the adolescent blood donors.

It's not easy. In another way, if you look at it in the literal sense, it is an attempt to improve accessibility of condoms. That is one side. The other side... practically because of culture whereby parents are reluctant to accept that young people have sexual relations, I think young people may be nervous to let the till operator know that they want to buy a condom 'coz they might be asked what they want to use it for at their age-**Peter, MKI**.

It was interesting to note that participants' responses on the accessibility of condoms in both shops and supermarkets were not uniform. Some participants were of the view that the till area is the right place to stock condoms since it minimises theft.

I think condoms are very small to such an extent that if they put them on shelves, some people may steal them and hide them. Nobody gets a chance to steal condoms around the till area-**Robert, MA**.

Conversely, one of key informants argued that the till area serves to remind people to buy condoms.

It [till area] is a right place [to stock condoms] coz it's convenient for people to buy them. It's ok to display them so that if anyone sees them and has got something in mind, they can buy them. It's a right place-**Edie, FKI**.

Adolescent blood donors were asked how they would respond if they come across either a female adolescent or male adolescent carrying condoms. Responses indicated that it was against the norm for a female adolescent to carry condoms.

For a young woman it's like she is a prostitute. For a young man it's obvious that the condom is his and he will use it. The young woman may have female condoms but....u-umn, it's strange [laughs]. It's strange-**Robert, MA**.

Still some had different views; they argued that both female and male adolescents should have unfettered access to condoms.

I would try not to judge. I believe in.....everyone is entitled to their own choices. If my friend decides that today I am going to have sex, I would say ok, but what prompted that decision-**Doreen, FA**.

When a young man has got condoms we say at least he thought of reducing rate of contracting HIV [infection]. Even a young woman, she has realised that though she loves sex, but she realised the need to use protection so that she does not contract sexually transmitted infections-**Kudzai, MA**.

5.4.2 Knowledge of HIV transmission modes among adolescent blood donors

However, in some cases, knowledge acquisition may not always correlate with behaviour change. Knowledge of modes of transmission of HIV infection was assessed among the adolescent participants. Knowledge levels were moderately high. The commonest modes that were mentioned are: unprotected sex (n=10), mother to child transmission (n=6) and needle stick injuries. Only one participant mentioned blood transfusion. Adolescent blood donors attributed their higher knowledge levels when compared to non-donor adolescents to the regular education they receive whenever they give blood.

5.4.3 Risk perception of HIV infection

Adolescent participants were asked to report their perceived risk of contracting HIV infection. All of them reported either a low risk or no risk at all. Most of those who reported no risk mentioned that they had never had sex.

HIV infection doesn't come to you walking on two legs-**Thomas, MA.**

I have no risk at all-**Robert, MA.**

However, some of adolescent blood donors who reported a no risk of HIV infection were quick to acknowledge other avenues through which HIV acquisition can occur.

I may contract HIV through contaminated sharp objects. I can say I have no risk of HIV-**Jayden, FA.**

5.4.4 Adolescent donors' perceptions about the effectiveness of condoms.

It was important to assess adolescent blood donors' perceptions with regards to the effectiveness of condoms in reducing risk of HIV transmission. The assumption was that those who believe condoms are effective were likely to use them *ceteris paribus*; all things being constant. Interview questions were posed as follows:

"What is your view about condoms as a way of reducing the risk of HIV infection?"

There was a confluence of responses across both sexes on the effectiveness of condoms in reducing the risk of HIV transmission during sexual encounters. However, adolescent participants were quick to point out that condoms do not confer a 100% protection against HIV infection. Both sexes highlighted risks that may ensue when a condom bursts or slips off during sex.

Like, it [condom] may not be inserted properly and it can cause many things-**Trisha, FA.**

Numerous echoes from the adolescent participants on condoms bursting during sex may expose a lack of adequate knowledge on effective condom use among this group.

5.4.5 Practical skills about condom use among adolescent blood donors

Participants acknowledged that condom use is a safer sex imperative aimed at reducing the risk of transmission of STIs. The key informants hinted that without effective knowledge on how to use a condom, condom availability and accessibility may not always produce the desired results. Knowledge about condom use was assessed among adolescent blood donors by their response to the questions below:

Do adolescent blood donors know how to use condoms? This was followed by; *Do you know how to use a condom?* Knowledge on condom use among male adolescent donors was low.

From a personal point of view....'coz I have never done it you see. I have never had sex. But I think I have an idea-**Bradly, MA.**

I don't know coz I have never used a condom-**Robert, MA.**

5.4.6 Key informants' perspective on condom use among adolescent donors

Knowledge about condom use among adolescent donors clearly needed to be viewed from another angle. Thus to validate responses from adolescents, I invited the perspective of the key informants. They gave responses to the following question:

What do you think is the level of condom use among adolescent blood donors?

All of the four key informants were of the view that the level of condom use is very low among adolescents in general and adolescent donors in particular.

In my opinion, I think young people are not using condoms 'coz we shouldn't be witnessing a lot of pregnancies and STIs-**Edie, FKI.**

There was a general consensus among the key informants that reasons for low condom use among adolescent blood donors were multi-factorial. Some of the factors act at an individual level. The key informants reinforced the point that condoms were not used correctly.

... it is because of peer pressure. They say using a condom is like sucking a sweet which is wrapped in plastic. Some may not have enough knowledge about condom use. Some may use them but may not know how to use them properly. Since they are young, they may not have had the exposure to go to workshops where people are taught about condom use. Thus the condoms may not provide adequate protection-**Edie, FKI**.

Young people used to have a challenge in using condoms. For some it was due to lack of access; for some it was due to lack of knowledge on how to use condoms. So when they used them, they ended up getting infected-**Sr Ranga, FKI**.

Other factors were contextual, and were more to do with the socialisation process.

Condom use especially among those [adolescents] in church is a challenge. When they come to the clinic we tell them the importance of using condoms; when they go to church they are preached to against using condoms and the disadvantages thereof. They end up getting confused, and they follow what the pastor would have preached-**Chiedza, FKI**.

I think if at all they use condoms, the level is very low or minimal 'coz in our culture, very few people would want to talk about sex in the family home—teaching their children on how to protect themselves if they decide to have sex. Not a single parent would want to believe that their child is having sex [laughs]-**Peter, MKI**.

They also attributed low condom use to wider factors such as abuse of drugs and alcohol. The link between condom use and alcohol could be traced to the places that are visited by adolescent donors when they go to for a drink.

.. the areas they go to for a drink are likely to have CSW who if they see these youngsters, they would want to have sex with them-**Peter, MKI**.

The factors responsible for low condom use were traced back to lack of knowledge on how to use condoms. This knowledge could be obtained from parents and institutions of socialisation such as the school life skills programme. The absence of such could be a wider contributing factor to low condom use. One of the key informants summed up this as follows.

For them to believe that their child is having sex ... they don't want. It's unacceptable [for them], and they want to believe that all children are "saints". ...the level of condom use among young people is low. Moreover, in our schools, we are yet to have a policy which incorporates condom use

into adolescent sex education. I am yet to know about it if all such a policy was enacted. Since young people do not have the exposure to such teachings, I don't think they can do that [use condoms]. At the same time we have some religious groups that are against condom use-**Peter, MKI.**

Key informants cautioned that condom uptake may not always translate to condom use. They acknowledged the challenges they encounter in estimating condom use by adolescents.

When the condoms are taken, we don't know whether they were used. We count the number of condoms we put in stock, but when they are taken we are not sure of the age groups that would have taken the condoms neither do we get any information on usage. This is not very clear since we still witness many cases of STIs-**Sr. Ranga, FKI.**

According to the key informants, an increase in the number of STIs and teenage pregnancies *vis-a-vis* a corresponding increase in number of condoms distributed creates a paradox, a Charlotte's web whose intricacies could be better understood by looking into the sexual relations among adolescent donors.

Section C

5.5 Sexual relations among adolescent blood donors

5.5.1 Preamble

Sexual behaviour is a sensitive subject. There is a lot of secrecy about it, especially in conservative Africa. Reliable responses may be obtained if participants open up during the interview. Interview questions were arranged in such a way that after asking about their membership to the Pledge 25 Club, and possibly after acknowledging them for milestones they had covered in their quest to get to 25 donations, participants were then asked how they were going to attain 25 donations. In essence, that meant how they were going to ensure that their blood had to be safe from STIs until then. This ensured a gentle transition to exploring their sexual behaviour. I chose STIs ahead of HIV since I considered the latter to be sensitive. Moreover, I asked a presupposition question:

“How do you keep yourself from contracting STIs?”

5.5.2 Abstinence

The overall response to this question was positive. Adolescent blood donors identified abstinence from sex as the most reliable and proven method to avoid the transmission of STIs. The results as shown in Table 6 indicate that 70% (n=7) of the adolescent participants were abstaining from sex.

Table 6: Methods used by adolescent blood donors to reduce risk of HIV infection

	Abstinence	Condom use	Total
Male blood donors	4	2*	6
Female donors	3	1	4
Total	7	3	10

* One participant avoided the question on condom use.

Reasons put forward for abstaining from sex were three-fold, and branched off from both physical and spiritual dimensions.

5.5.2.1 Spiritual dimensions shaping abstinence

Firstly, religious piety among adolescent blood donors, especially females had a cardinal role in promoting abstinence. This was considered to be abstinence in the absolute sense of the word.

In church we are told that even a kiss.....One is not supposed to kiss a boyfriend. You keep yourself pure [holy]...I am a Catholic; a devoted

Catholic such that I am controlled by my religion. So if I ever decide to date, I would find out whether we share similar values with the partner. But as of now, I will be celibate until I get married. That is how it has been for the past 20 years till now-**Doreen, FA**.

One may be having a girlfriend who may be against having sex: she will be strong against it to the extent of opening up the scriptures to support her statements. That's when he realises that the girl has refused and there is no deal-**Kudzai, MA**.

5.5.2.2 Abstinence as physical control and suppression of sexual feelings

Secondly, others considered abstinence as refraining from sex only. This was influenced by the fear of HIV infection. This type of abstinence involved an effective control of the sexual relationship coupled with a strong will to exert physical restraints on sex.

I can put some limits. When the romance [caressing] gets "hot", I "apply the brakes". I "apply the brakes", otherwise I get infected-**Robert, MA**.

Apart from fear of HIV infection, abstinence was also necessitated by the fear of losing their status as blood donors when they are deferred permanently from giving blood.

By avoiding sex so that I don't contract HIV [infection]. It is a fearful thing for me to be told that my blood is no longer safe-**Jayden, FA**.

.. If I were to sleep with women and contract the disease, the moment I give blood, they [NBSZ staff] will realise that I have contracted AIDS [HIV infection]. Because each time I give blood, my blood is tested, and they discover that [my blood is HIV positive]-**Robert, MA**.

Thirdly, other participants considered themselves to be not in a hurry to indulge in sexual activities. Within this group are those who considered themselves to be young, and/or showed a self determination to dissuade peer pressure to have premarital sex.

I said to myself I won't indulge in [premarital] sex because sex will always be there, even in old age. It doesn't deplete. So I say to myself even if my girlfriend says let's have sex, I will tell her it's better we terminate our relationship 'coz it [sex] has no benefits..... It [sex] is like chilli. Some may say it [chilli] tastes nice, because they like it; but in reality chilli is bitter. That's the reality-**Kudzai, MA**.

Two male adolescents reported they were no longer abstaining from sex. One of them reported consistent use of condoms with a regular female partner. The other one had a

regular partner. However, he avoided the question on whether they use condoms in their relationship.

A-ah protection is not guaranteed. You may face some challenges when using protection...However, we have not reached that stage. We only managed to get tested [for HIV at a voluntary counselling and testing centre]; I stick to her only-**Tendekai, MA.**

Given that both male participants had regular partners, it was important to look at condom use within their partnerships. In addition, there was a need to look at what adolescent participants knew about condom use among adolescent donors in general.

5.5.3 Condom use in sexual relations

It was important to assess condom use among adolescent blood donors. To get this information, adolescent participants were asked the presupposition question.

How do you keep your blood safe from STIs?

Some female adolescent participants reported that generally, male adolescents hate condom use on the grounds that they reduce pleasure. They further argued that since sex is done for fun in schools, a condom defeats the whole purpose of having sex. Moreover, they cited peer pressure in schools. Interestingly, male participants "threw" back this blame at female adolescents. They argued that a female partner may not like using a condom if she wants to get married.

But young women....young women cannot be trusted. They follow everything. If a young woman loves you, she leaves you to "dig" into her even without using a condom. Her motive will be to get pregnant so that she can elope to you. That is the plan. So, if the young man doesn't take it upon himself to use.... [Laughs] **Robert, MA.**

However, this debate was settled by the responses from both sexes on the question of whom they thought insists on using condoms during sexual encounters. The majority from both sexes reported that it is the female partner since she will be trying to avoid pregnancy. They stressed that a pregnancy affects female adolescents in many ways.

...usually it's the girls. Besides the fear of HIV infection, there is fear of pregnancy. Pregnancy closes many opportunities for you, especially when you are in high school, you might be chunked out of school. In university, no one cares, but it would mean divided attention now: you have to read your books, yet you might not be feeling quite well-**Doreen, FA.**

... it's the young women 'coz they are afraid of falling pregnant. When they fall pregnant, they are dumped by their boyfriends-**Bradley, MA.**

On the contrary, some male adolescent donors reported that young men may have the freedom to have unprotected sex.

...young men don't get pregnant so if any mistake [pregnancy] occurs, the blame is shifted to the young woman.....so the young woman is afraid because her freedom is limited if she gets pregnant....they are dumped by young men...Young men can fit anywhere-**Kudzai, MA.**

These responses were different from those given by two male adolescents who reported that they were no longer practising abstinence. Both were of the view that both partners decide condom use. Thus, the responses by the rest of participants may expose different types of partnerships as well as the dynamics and circumstances bordering them.

5.5.4 Turning the gaze inwards: unpacking the sexual relations.

The responses obtained from all the adolescent participants clearly showed that sexual relationships are not uniform. For them, condom use depended on the nature and duration of a sexual partnership. It was necessary to look into the intricacies involved within the sexual relationships, and try to decipher level of condom use. I describe and dissect condom use in two broad themes that emerged from my interviews with key informants and adolescent blood donors. The broad themes and sub-themes are teased apart in Table 7 below.

Table 7: Thematic table for sexual relations

Nature	Duration
Age mixing	Short term relationships
Sexual relations between two regular blood donors	Long term relationships

5.5.5 Duration of sexual relations

5.5.5.1 Short term/Automatic relationships

Most of the adolescent blood donors reported that these sexual relationships mainly occur at parties. Moreover, condom use was reported to be low when caressing precedes acquisition of condoms.

Sometimes condoms may not be available. It's very rare for a person to run [to the shops] and purchase the condoms, leaving behind the girlfriend. Boys [peers] say, "Aaah! She will be gone by the time you come back [from the shops]!" So it's impossible [to use condoms]-**Bradley, MA.**

However, generally some adolescent blood donors were reported to have a fore knowledge of the risks of unprotected sex.

When he finally gets to his girlfriend, he leaves her for two minutes before he caresses her so that he runs around in search of condoms-**Robert, MA.**

5.5.5.2 Long terms relationships

These were defined by the adolescent participants as relationships that are at least three months old. However, some adolescent participants reported that in long term relationships, condoms use may decline with time as trust between partners builds up.

..at first you'd use a condom, then after a while, when you're used to each other, he'd then say "lets us get rid of condoms". Because you are caught in the moment, it would happen. He gradually wears down your innocence until you are brought down to the level he so desires-**Doreen, FA.**

There were no pointers to show that female adolescents look for male blood donors as potential partners and/or vice versa. Thus, male partners in the general population may not share their values of keeping blood safe through abstinence or condom use. To obtain unprotected sex from female adolescents, some men were reported to use either implicit or explicit force.

5.5.5.2.1 Implicit force: Caressing and flattery

It was clear from the responses given by adolescent blood donors that males initiate sex. Men were reported to caress their female partners until they give in to sex. Moreover, they reported that depending on the timing of caressing, condoms may not be used.

A girl? Initially she might object to sex. But the way she will be caressed, u-ugh... [Laughs]. She will get weak and leave everything to the young man. She ends up having sex with her boyfriend-**Robert, MA.**

.....the sugar daddy caresses her so strongly that she cannot respond or talk [about using a condom]. She will not get any chance to say anything coz of what the sugar daddy will be doing to her-**Robert, MA.**

Conversely female adolescent participants were of the view that some men are able to convince their female partners into having unprotected sex.

....the girl would mention [condom use] but....men will always have that psychological advantage. He flatters you until you are satisfied. "Don't you trust me? This is real love". The moment you hear these words, your heart

warms up to the illumination you will be receiving. The "holy spirit" descends upon you, you know [laughs]. You would then think this is how it feels to be loved. Eventually, you would let it go-**Doreen, FA.**

5.5.5.2.2 Explicit force: Accusations

Some female adolescent participants reported about accusations that may be levelled against them when they resist sex from their male partners. Accusations were reported to stem from a variety of sources. Female adolescents may be accused by their male partners of having another partner, probably a sugar daddy.

It's a pity that the population of young men has gone down these days. So the young woman would be saying to herself, "If I lose my boyfriend.....the young man may suggest having sex....she might suggest using protection. The young man may object to this strongly. Most young men are against using condoms 'coz they will be saying, "You are my girlfriend so whom do you want to have unprotected sex with, yet I am your boyfriend? Maybe you have other sexual partners." He starts to accuse you at the top of his voice. You end up saying to yourself, "u-ugh, maybe he thinks that I have other boyfriends, let me just have unprotected sex with him"-**Michella, FA.**

Accusations may be fuelled by economic deprivation among female adolescents. Male partners may threaten to withdraw their financial support unless they get unprotected sex. On the other hand, one adolescent male donor reported that unprotected sex may be forced upon male adolescents by their non-blood donor partners whose HIV status is unknown.

It's rare for your girlfriend to agree to get tested [for HIV]. She may accuse you of not trusting her. You end up having [unprotected] sex-**Kudzai, MA.**

To sum up, condom use was reported to be low in both long term and short term relationships involving adolescents. It was important to note that the two adolescent blood donors who reported they are no longer abstaining from sex had long term faithful partners. The one who did not report consistent condom use knew the HIV sero-status of his sexual partner.

5.5.6 Nature of sexual relationships

5.5.6.1 Sexual encounters between two adolescent blood donors

Against the backdrop that most adolescent blood donors abstain from sex on grounds of fear of HIV infection, it was important to establish what they thought could be the level of condom use between two known regular blood donors who recently donated blood.

Responses to this question are grouped by sex in Table 8 below. This table is quite revealing in that it exposes misconceptions across both sexes about condom use in sexual encounters involving regular blood donors. It is also apparent that half the number of participants considered condoms to be unnecessary.

Table 8: Condom use in sexual relations between two regular blood donors

	Condom is necessary	Condom is not necessary	Total
Male adolescent donors	4	2	6
Female adolescent donors	1	3	4
Total	5	5	10

There were conflicting views about condom use. Most of the female participants did not anticipate risk of HIV infection. Some ignored risks of both HIV and pregnancy.

Um-mn...I don't think there is need to use a condom, unless one of them is not a blood donor. If both are blood donors, there is no need **Michella, FA.**

The simplistic view about HIV risk was central to many adolescent participants. They considered regular blood donors to be HIV negative. However, they acknowledged the possible risks of pregnancy if condoms are not used.

A condom is used as a way to prevent pregnancy because both partners will be alright [HIV negative]. It's an obvious case that the donors will be alright, so there is no need for the New Start Centre⁶ [VCT]-**Kudzai, MA.**

There is no need 'coz I know that my boyfriend is alright [negative] and he knows that I am alright. The only problem is that I may fall pregnant. I may not know whether he is prepared to accept me in his home-**Jayden, FA.**

Some acknowledged the possible risk of HIV infection, especially during the asymptomatic stage of the infection (refer to Figure 2 in section 1.3).

.....it would not be safe....'coz even if I am a P25 [Pledge 25] member. I can do something like having sex before a donation and contract HIV. You are not always safe-**Bradly, MA.**

⁶ A place where people get tested and counselled for HIV. Used synonymously with voluntary counselling and testing centre

5.5.7 Sexual debut and age mixing

Adolescent blood donors and key informants were asked to give their views about median age at first sex for adolescent donors and adolescents in the general population. This is the age at which 50% of adolescents debut sex. The results are summarised in

Table 9 below.

What is interesting in the data is that the responses given by adolescent participants are almost similar to those given by key informants. The most striking result to emerge from comparison data is that generally females debut sex two years earlier than their corresponding male counterparts. Moreover averaged data clearly shows that generally blood donors debut sex two years later than non-donors.

Table 9: Estimated median age at first sexual encounter* among adolescents

	Adolescent blood donors		Adolescents (general population)	
	Males	Females	Males	Females
Male participants	18	17	15	14
Female participants	19	16	16	14
Key informants	17	15	16	14
Average	18	16	16	14

* Cases of rape were not considered

Early sexual debut was attributed to a plethora of factors. Participants attributed that to social environment and peer pressure.

Peers say you can't maintain your virginity until 20 years-**Kudzai, MA.**

..her sister may be having a boyfriend, she also decides to have one-**Robert, MA.**

...a greater percentage of students is sexually active.....They think they have knowledge when in actual fact they don't have much skill to protect themselves...Yet, some will be doing it for other reasons like if my friend has got a nice watch, so I need mine-**Trisha, FA.**

Some are pressured to have boyfriends by their friends who would be saying they are enjoying life-**Kudzai, MA.**

..access pornographic material....want to experiment what they would have watched-**Peter, MKI.**

I think peer pressure in schools, yah there is a lot of peer pressure. You end up having it [sex] even if you never intended to-**Bradley, MA.**

Early sexual debut was reported to go hand in hand with age mixing since the participants thought that young women are likely to have older male sexual partners. This has implications on condom use (refer to section 5.5.8 below). Moreover, those who start sex at an early age were reported to be likely to have long sex lives thereby exposing themselves to STIs for a long time.

5.5.8 Females lack control over their sex lives – a sequel to HIV infection

Lack of power in unbalanced sexual relations was thought by respondents to compromise decision making on condom use. It was considered that decisions may be made which are not in the best interest of adolescent donors. Responses on condom use are summarised as follows:

A-ah, her understanding is limited. She is immature; the sugar daddy is old and is experienced. In addition, the sugar daddy caresses her strongly to the extent that she cannot respond or talk. She will not get any chance to say anything [about condom use] coz of what the sugar daddy will be doing to her-**Robert, MA**.

Some adolescents are forced by economic circumstances to risk acquiring STIs including HIV in an endeavour to get some money.

Condom negotiation is a challenge in that the young woman I was talking about is impoverished; she is poor and the person who is coming to have sex with her has got the money. In the negotiation process, the one who has got the money has more power....In fact if you talk to some youngsters who are into the practice, they say that some men don't want to use a condom and are prepared to pay more money for having unprotected sex-**Peter, MKI**.

Thus, power imbalances were described as being inherent even in balanced sexual relations. Once again, gender roles and cultural connotations were thought to play a major role in what happens in a sexual relationship.

...they lead...maybe 'coz they feel [think] they are the husbands [laughs]. They have the right to speak about it [laughs]-**Tendekai, MA**.

At that moment she might suggest using protection [a condom]. The young man may object to this strongly-**Michella, FA**.

It was apparent from the responses given that MTCT was another avenue for HIV among young blood donors aged 16-20 years.

Some acquire the infection when it is passed on to them by their parents-
Trisha, FA.

Two female adolescent donors that I counselled recently believe they got the infection during birth. They reported that their parents died after long illnesses-**Chiedza, FKI.**

...there are people who I know they acquired the infection from birth, but you may not notice they have the disease-**Robert, MA.**

5.6 Conclusion

In this chapter I looked at study context, sexual behaviour as well as the demographic characteristic of study participants. I devoted much time to condom use in sexual relationships. In the next chapter I am going to discuss the results and relate them to literature.

Chapter 6: Discussion

6.1 Introduction

In this study, I sought to identify sexual behaviour and practices among adolescent blood donors as well as the contextual factors that may shape such behaviour. In the results chapter, I explored a range of sexual behavioural factors which may contribute to the increasing incidence of HIV among adolescent blood donors. I also described the participants; the study context as given by the participants; compared sexual behaviour by participant groups; compared responses from the participants to all the factors that they felt impacted on them being able to have a particular sexual behaviour. In this section, I discuss the results in the following order:

- Discussion of the findings and comparing them with the existing literature
- Consider two health promotion theories that may explain the findings
- Critique the two theories and explain how contextual factors may limit the applicability of these health promotion models
- Show the limitations of the ABC model, which is based on the two models
- Make policy suggestions
- Show the limitation and strengths of this study
- Highlight other possible explanations for incident HIV among adolescent donors

6.2 Discussion of the findings

Once again, I am going to use Bazeley's (2009) Describe-Compare-Relate approach. I will focus on the last aspect which is relating the study findings to other studies.

6.2.1 Knowledge of HIV transmission modes.

Adolescent donors demonstrated a lack of comprehensive knowledge about HIV infection. For example, only one adolescent participant mentioned blood transfusion as a possible avenue for HIV transmission. Previous studies on blood donors have not assessed this variable. Nevertheless, the findings from this study compare with ZIMSTAT and Macro Inc.'s (2011) observation that young people lack comprehensive knowledge about HIV infection. Among adolescent participants, HIV knowledge was attributed to the periodic information they receive in the form of information and education material as well as educational talks on HIV prevention each time they go for a blood donation session. However, such knowledge cannot be entirely attributed to one

being a donor. Other sources of such knowledge include the media, school life skills programme and voluntary counselling and testing centres. This is plausible since the new blood donor had more knowledge than most of the adolescent participants who were regular blood donors.

The observed knowledge about HIV infection should be interpreted with caution. In this study, knowledge of HIV infection was based on self-reported responses to a single question on HIV transmission modes. As a result, subjectivity cannot be ruled out since a standardised measure was not used. It is also important to note that even high knowledge levels about HIV infection may not translate into behaviour change.

6.2.2 Risk perception of HIV infection among adolescent blood donors

Prata, Morris, Mazive, Vahidnia and Stehr (2006) describe HIV risk perception as one's assessment of risk of contracting HIV infection. It is one of the indicators of previous and current lifestyle. Adolescent blood donors perceived themselves to have no risk of contracting HIV infection. Two adolescent participants had been previously tested for HIV at voluntary counselling and testing centres. Yet, they reported no risk of HIV infection. These findings contradict Prata et al.'s (2006) observation of a positive association between HIV risk perception and factors such as having a previous HIV test, unprotected sex and multiple sex partners.

The difference could be attributed to the populations that were sampled. Prata et al.'s (2006) study was based on the general population which could be different from the adolescent blood donor population. In addition, the difference could be attributed to abstinence which was reported by most ($n=7$) adolescent blood donors. Both Harare and Masvingo provinces lie within a geographical context where unprotected heterosexual intercourse accounts for 85-90% of reported HIV infection (Simon et al., 2006). It could also mean that sex is considered to carry the highest risk of contracting HIV infection. As such, those who had never had sex may have considered themselves to have no risk of HIV. It is also plausible to attribute the responses to the fact that adolescent participants had recently given blood. This may have given them the impression that their blood was safe. However, such safety is in retrospect: donated blood is only tested after the donors have left the blood donation centre. Blood donors are allowed to give blood on the basis of the information they provide about their sexual behaviour and/or their previous test results which are negative for HIV.

A low risk perception of HIV among adolescent participants needs to be looked at from another angle—misplacement of risk. This is plausible in the sense that one female adolescent acknowledged she could contract HIV infection from contaminated sharp objects. Yet she reported no risk of HIV infection. For this reason, ZIMSTAT and Macro Inc. (2011), observed that adolescents in the Zimbabwean general population have a poor rating of their risk of HIV infection. Elsewhere, Do and Meekers (2009) observed that male adolescents under-report HIV risk despite reporting having multiple sexual partnerships. In addition to misplacement of risk, social desirability bias in responses cannot be ruled out as well (social desirability bias is described in section 6.8 on page 94).

6.2.3 Availability and accessibility of condoms by adolescent blood donors

Condoms were readily available and accessible to adolescent blood donors from health institutions. All the participants attributed this to the youth friendliness of services in these institutions: access to condoms is done privately during consultation visits. By contrast, accessibility of condoms by adolescent blood donors from supermarkets was reported to be a challenge. This was described as stemming from a plethora of factors ranging from the behaviour of some till operators who may ask the adolescents what they need condoms for, to the way condoms are stocked. Condoms were reported to be stocked around the till area, making it difficult for adolescents to buy them in full view of strangers and friends. Apart from structural barriers to condom uptake, cultural norms governing sexual behaviour as well as gender stereotypes made it difficult for adolescents, especially females, to purchase condoms.

6.2.4 Practical skills on condom use among adolescent blood donors

This study showed that adolescent blood donors lack practical skills on condom use. This confirmed UNICEF's (2002b) finding that young people lack practical skills on condom use to adequately protect themselves against HIV infection. The key informants attributed this to a lack of education on condom use in both schools and homes.

In homes, cultural taboos make it difficult for parents to discuss sex with their children. Parents socially construct condom education among adolescents as a "recipe" for premarital sex. Moreover, from my personal knowledge, Shona discourse associates condoms with commercial sex work, and this may hamper efforts to promote condom use, especially among female adolescents. Murombedzi (2011) reported that parents overturned the National AIDS Council's decision to distribute condoms in schools.

Some religious and cultural practices preach against condom use. Sambisa et al. (2010) observed that cultural underpinnings can have a stronger effect than education. Adolescents from such cultural backgrounds tend to follow what their leaders say. Such doctrines clash with what the adolescent donors learn from the media, school and during donation sessions. Consequently, not all adolescent donors know how to use condoms, despite condoms being advocated for in the ABC model for HIV prevention.

Without practical skills on condom use, adolescent blood donors may be at risk of HIV infection. Since sex is a "private business", condom use may be more secretive among adolescents who may use them incorrectly. Both key informants and the adolescent participants reported they see and hear about many cases of pregnancies and condoms bursting in their communities. This exposes incorrect use of condoms, and therefore warrants the need to understand the level of condom use in this group.

6.3 Sexual behaviour and practices among adolescent blood donors

Sexual behaviour encompasses condom use, nature of relationships and sexual debut.

6.3.1 Condom use in sexual encounters in which HIV risk is low

Condom use is one of the proven methods to prevent STIs and pregnancies. In this study, condom use seemed to depend on the nature and duration of sexual relationships. Two regular donors in a sexual relationship were considered an example of an HIV negative couple. Half of the number of adolescent participants considered condoms to be unnecessary in such relationships. The study also revealed that adolescent blood donors tend to trust each other to have no risk of HIV infection. Trust bestowed on sexual partners draws parallels with trust that builds up in long term relationships (Gregson et al., 2002), and may put adolescent blood donors at risk of HIV since condom use is likely to be low.

Condom use among adolescent blood donors is likely to be low when risk perception of HIV infection is low. Female adolescents expressed greater acceptability of unprotected sex under such circumstances. However, some of them mentioned condoms as a means to prevent pregnancy, either when they are still in school or when the male partner is not ready to marry them. It could mean that those female adolescent participants who did not mention about condoms were thinking about other methods of preventing pregnancy like oral contraceptive pills. However, information about oral contraceptive pills was

not asked for during the interviews. The omission of condom use by adolescent participants as a way to prevent HIV infection when HIV risk is low exposes an inclination towards unprotected sex whenever risk of HIV is low.

The findings on condom use among adolescent blood donors may be extended to their sexual encounters with partners who are not blood donors. This study revealed that condoms were not used consistently by male adolescent participants who got tested for HIV infection (at voluntary counselling and testing centres) together with their partners who were non-blood donors. It could mean that HIV negative test results are disincentives for either condom use or consistent use of the same. Thus, the extent to which VCTs serve as institutions that may endorse unprotected sex is unknown.

6.3.2 Age mixing

Age mixing is when adolescents have sexual relations with partners who are at least 5-10 years their senior (NAC, 2009). It may be an indicator for power imbalances within the sexual relationship. Adolescent participants reported that some of their peers engage in sexual relations with older partners. Female adolescents were exposed to older male partners in their communities and during parties at tertiary institutions. Gregson et al. (2002) observed that age skews power towards the older partner who assumes control over the sexual relationship. Older partners consider adolescent donors to have a low risk of HIV infection, especially if they are blood donors who are considered to be HIV negative. Power is further skewed owing to cultural norms that prescribe female adolescents to be naive during sex (Hillier et al., 1998).

Economic deprivation may increase acceptability of unprotected sex if more money is promised after the encounter. This study has shown us that marked age difference and culture may conspire with economic deprivation to amplify power imbalances, making it difficult for adolescents to insist on either abstinence or condom use. The National AIDS Council (2006) noted that age mixing is the reason why HIV infection is transferred from the older to the younger generation.

6.3.3 Condom use in balanced sexual relationships

Balanced sexual relationships are those in which both sexual partners are almost of the same age and economic status. They may represent evenly distributed power in a sexual relationship. However, this study revealed that male adolescent blood donors tended to exert their authority over their female counterparts by simulating the role of a husband. By twisting the relationship into mimicking a marriage, power is shifted towards the

male partner in a subtle way. Furthermore, the female partner, in trying to play the role of a potential wife, has to be submissive, and in so doing, cedes power to the young man. Consequently, male adolescents assume greater control over sex, condom use and the caressing process. These findings suggest that culture and gender imbalances are inherent in sexual relationships (Amaro, 1995).

6.3.4 Abstinence from sex

Most (n=7) of the adolescent participants were practising abstinence. Abstinence was due to fear of HIV infection and/or of losing their status as donors after being deferred from donating blood and to a lesser extent, religious piety.

Fear of HIV infection was the major reason put forward for abstinence. It forced male adolescent blood donors to exercise sexual restraints since they initiate caressing in all cases. One of the male participants used the imagery, "I apply the brakes" to portray how he controls his sexual desire to avoid contracting HIV infection. Sexual restraints are derived from a fore-knowledge about the repercussions of having unprotected sex, especially with a partner whose HIV status is unknown. While male adolescents reported reliance on the physical dimensions to "tame" their sexual desire, female participants leveraged on the spiritual dimensions.

Religious piety had a cardinal role in promoting abstinence among the female adolescent participants. This study revealed that casual religion does not promote abstinence: most of the adolescent participants who identified themselves as Christians did not demonstrate Christian values such as abstaining from caressing and sex. Abstinence based on religious faith was in the absolute sense – keeping oneself from caressing the opposite partner.

The reported abstinence by adolescent participants may not necessarily mean all of them had never had sex before. Although most adolescent participants reported they had never had sex, which is primary abstinence, the rest may have had previous sexual encounters before they entered the blood donor pool. They may have decided, later on, to change their behaviour in order to safeguard their blood. This is secondary abstinence (NAC, 2006).

Abstinence could be attributed to increased knowledge about HIV prevention methods, as taught in schools, media, and NBSZ functions. Behaviour change messages based on the abstinence, be faithful and condom use (ABC) approach stress the importance of

abstinence to guard against pregnancy and STIs including HIV infection. It could reflect the effectiveness of translation of such knowledge into action. However, will power to abstain may wane when they are less empowered to control their behaviour. This may result from wider factors like partying, economic deprivation and gender imbalances.

6.3.5 Contextual factors have greater effect on shaping sexual behaviour

The role of religion, economic factors and culture as contextual factors shaping sexual behaviour has been described above. This study also revealed that partying opens up avenues for contracting HIV among adolescent donors. The participants' responses implied that freedom at nocturnal parties centred on scanty dressing, consumption of alcohol and seductive dances. The dances, for some, lead to sexual arousal, which together with drug intoxication, may increase chances for casual unprotected sex. Moreover, some participants alluded to the fact that there may not be enough time to get condoms before having sex. To my knowledge, the impact of partying on sexual behaviour among adolescent donors has not been previously described in the literature.

Adolescent donors were also exposed to pornographic material from the media and pirated discs on the streets. Most pirated discs are sold under a false title to reach out to unsuspecting customers. Krever (2013) argued that pornography pushes young people into "sexualised versions of themselves". They may want to experiment what they would have watched during the movies.

6.4 Incidence of HIV infection among female donors – a gender issue?

A disparity in the disaggregated data for HIV incidence between male and female adolescents exposes gender differences. Mandisodza et al. (2006) observed that female adolescent donors were twice as likely to give HIV positive blood than their male counterparts. Within the general population, ZDHS (2011) observed HIV prevalence of 3.8% and 4.2% for male and female adolescents aged 15-19 years respectively. This study highlights the factors which may explain why the high incidence of HIV in female blood donors.

Adolescent participants reported that more female adolescent donors as compared to their male counterparts have sexual relations with older partners. This could be due to economic circumstances, social pressure to attain career goals and personal choice. Economic circumstances may force female adolescents to look for older male partners who provide them with money for school fees and rent. Money has become a tool to

coerce female adolescents into sexual relations. In tertiary institutions, a higher pass mark may be awarded after having sex with a lecturer. Yet, some female adolescent donors tend to prefer dating older men to male adolescents since the former are considered to be mature and financially stable. However, older men are likely to have sex with their wives and commercial sex workers (Gregson et al., 2002). Power and age imbalances inherent in such relationships may reduce condom use.

6.4.1 Early sexual debut among female adolescent donors

Female adolescent donors debut sex earlier than their male counterparts. This study estimated that the majority debut sex at 16 years, which is two years earlier than their male counterparts. Early debut could mean that female adolescent donors are sexually active for longer periods than male adolescent donors. This exposes them to HIV infection since they are likely to debut sex with older male partners (UNICEF, 2002). In addition, UNICEF (2002b) observed that young people who debut sex early may not adequately protect themselves against STIs, including HIV infection. Previous studies observed that median age at first sex was 18 years for both sexes within the general and the blood donor population (Gregson et al., 2002; Hallett et al., 2007). This study showed that median age at first sex remained constant only for male adolescents. However, it is still not clear whether sexual debut has actually decreased for female adolescent blood donors since previous studies did not provide confidence intervals.

6.4.2 Acceptability of unprotected sex when HIV risk is low

More female than male adolescent participants considered condoms to be unnecessary in sexual encounters between two regular blood donors. This has negative implications on condom use, especially when HIV risk is perceived to be low. However, this result contradicts most literature which associates unprotected sex with male adolescents. Perhaps, this is because the findings are based on a small sample size.

6.4.3 Female adolescents lack control over their sex lives

Female adolescents do not have physical control over their sex lives. Whereas male adolescent blood donors can decide when to have sex, female adolescents are "ambushed" for it. When sex is not planned, condoms may not be used. Even if the desire to use a condom arises, most male adolescents may not use condoms since sex is done after a long tussle with their female partners. Female adolescents tend to keep their religious and moral sanctity. However, this study showed that some men have developed mechanisms to "extract" them from that realm.

6.4.3.1 Tactics used by men to get (unprotected) sex from female adolescents

Maintaining abstinence was a challenge for female adolescent donors interviewed in this study. This study revealed that their sexual partners use many tactics that are on a continuum ranging from persuasion to aggression. Some male partners may use flattery, caressing and accusations to get (unprotected) sex. One of the female adolescents used the imagery "holy spirit" to portray how powerful and subtle a tactic flattery is when used by men to get unprotected sex, especially in long term relationships. This imagery draws parallels to the Holy Spirit talked about in the bible. The Holy Spirit knows better than the medium who receives Him, and naturally the medium will be ready to "do as the occasion demands" – surrender to the will of the Spirit. The intellect and emotions are shut outside this realm as flattery opens up the door to the heart of the female adolescent. She then sets aside her own desires, and yields to those of the male partner. This finding confirms literature which shows that condom use declines especially in long term relationships when trust builds up (Gregson et al., 2002).

6.4.3.1.1 Caressing

Caressing is another subtle tool which was reported by the participants to be used by some men to have unprotected sex from female adolescents. The boundary between ordinary caressing which is for enjoyment, and "purposive" caressing leading to sex is not well defined and communicated to the female partner. If this boundary is overstepped, unprotected sex is the result. Moreover, this study revealed that unprotected sex is carried out when caressing precedes condom acquisition. This exposes female adolescents to HIV infection.

6.4.3.1.2 Accusations and sexual abuse

Female adolescents who do not consent to (unprotected) sex may be accused by their partners of having other male partners. This study showed that such female adolescents may end up having sex to safeguard their relationship. Apart from accusations, female adolescents, especially maternal orphans and those out of school, suffer many cases of sexual abuse (Asuka et al., 2012). Abuses may be perpetrated by close relations who may not use condoms, and may hide under the cover of culture such as *chiramu* (Asuka et al., 2012; Doyle et al., 2012; Kang et al., 2008; National AIDS Council, 2006; United Nations Children's Emergency Fund, 2002b).

6.5 Behavioural models as a tool to explain the observed sexual behaviour

In this section I am going to use both the Health Belief Model (HBM) and the Theory of Reasoned Action (TRA) to explain and predict sexual behaviour among adolescent blood donors. I start by giving a brief description of each model. Then I use the two models to explain and predict sexual behaviour among adolescent blood donors. I am also going to highlight short-comings related to use of behavioural models in explaining and predicting complex phenomena such as sexual behaviour, especially when contextual factors are factored in. Lastly, I am going to critique the model currently used in Zimbabwe – the ABC model. This will pave a way for policy recommendations.

6.5.1 The Health Belief Model (HBM)

This model is premised on the idea that people embrace preventive action against a disease based on the complex interaction among their perceptions of: susceptibility to the disease, seriousness of the disease, benefits of taking up preventive action, barriers to taking up preventive action and self-efficacy (which is an individual's perceived power to effect behaviour change) (Rosenstock et al., 1988).

6.5.2 The Theory of Reasoned Action (TRA)

This model is used to predict human behaviour that is under voluntary control (Nutbeam & Harris, 2004). It assumes that people make informed decisions which can be predicted in defined situations. The intention to assume a certain behaviour is a function of attitudes and social norms governing such behaviour. In this vein, people change or maintain a particular behaviour if they believe it will benefit their health. This is more likely if the behaviour is socially desirable, and people feel the pressure to change (Nutbeam & Harris, 2004). Short-term repercussions of a particular behaviour are key to predicting attitudes towards behaviour change. Self-efficacy assumes that people will change their behaviour if they feel they have the capacity to do so.

6.5.3 Applying the two behavioural models to explain sexual behaviour

Inaccessibility of condoms by adolescent blood donors from convenient places such as shops and supermarkets may be a key determinant for use. This study revealed that this may be due to structural factors, gender stereotypes and culture. The Health Belief Model predicts that adolescent blood donors may not use condoms if such barriers exist.

A low risk perception of HIV infection reported by all the adolescent blood donors may put their lives at risk in many ways: it may impact negatively on abstinence, sexual

debut and the number of sexual partnerships. The Health Belief Model predicts that adolescent blood donors may not take preventive action against HIV infection if they perceive they are less susceptible to the infection. Furthermore, they may not use condoms if they perceive their sexual partners have no risk of HIV infection. This study revealed that adolescent blood donors tend to "trust" each other. Such trust may reduce condom uptake and use in sexual encounters between two blood donors. This is because adolescent donors perceive themselves to have no risk of HIV infection. The study revealed that half of the adolescent participants considered condoms to be unnecessary in sexual encounters between two blood donors. This study showed that "trust" may be extended to sexual relationships between blood donors and their sexual partners who are not blood donors after testing HIV negative at voluntary counselling and testing centres.

These findings draw parallels with the UNAIDS' (2011a) observation that following the decline in HIV prevalence in Zimbabwe, young men in the general population reverted back to unprotected sex. This could be attributed to a low risk perception of HIV infection. However, the National AIDS Council (2006) reminds us that maximum protection against STIs is attained when condoms are used consistently and correctly.

Lack of practical skills on condom use among adolescent blood donors may expose adolescent blood donors to HIV infection. Drawing from the two behavioural models, self-efficacy is attained when adolescent blood donors feel they have personal control over their sexual behaviour. Thus, a lack of practical skills on condom use may instil a sense of both vulnerability and powerlessness. This may translate into incorrect, inconsistent or non-use of condoms. This also clearly shows that even with adequate knowledge about HIV infection, this group is not safe from the infection.

6.5.4 HBM and TRA explaining abstinence among adolescent blood donors

Behavioural models may help us understand why most adolescent participants reported fear of HIV infection as their reason for abstinence. On the one hand, the HBM predicts that the fear may stem from either perceived susceptibility to HIV infection or to fear of HIV as a serious disease, with devastating effects on families and long term stigmatising effects (refer to Figure 2 in section 1.3). However, since all the adolescent participants reported no risk perception of HIV, it follows they did not consider themselves to be susceptible to the infection. They may be afraid of HIV as a serious disease.

On the other hand, the TRA predicts that adolescent blood donors may be afraid of the short-term consequences of their sexual behaviour. These consequences could be in the form of contracting HIV infection or clinical symptoms of HIV infection that ensue. However, there are hardly noticeable short-term clinical health consequences of contracting HIV infection, yet the person can transmit the infection (refer to Figure 2 on page 11). Instead, this study revealed that most adolescent donors tend to be afraid of other STIs such as gonorrhoea owing to their short-term stigmatising, clinical manifestations. Thus, it is the HBM, not the TRA that may explain the reported abstinence. However, the TRA may be applicable once HIV screening of donated blood is factored in. The NBSZ tests all donated blood for HIV, syphilis, hepatitis C and B viruses. The current technology at the NBSZ detects HIV infection within 17 days of infection. Such a short *window period* risk means that blood donors who indulge in risky sexual behaviour at least two weeks prior to giving blood can be "identified".

According to the TRA, the consequences of risky sexual behaviour are exposed within a short time. Those who are positive for HIV are deferred from giving blood permanently. This line of thinking ties up the two main reasons given for abstinence: fear of HIV infection and fear of losing their social status as blood donors when they are deferred permanently from giving blood. Fear of HIV stems from the fact that their blood is screened for HIV infection each time they give blood. The NBSZ does mandatory testing of all donated blood as a way to guarantee the safety of blood supplies. By so doing, the NBSZ might have inadvertently devised mechanisms to monitor (risky) sexual behaviour among adolescent blood donors. To this end, periodic screening of donated blood differentiates adolescent blood donors from their peers in the general population, who may not know their HIV status after risky sexual encounters.

6.5.5 Are contextual factors beyond detection range of behavioural models?

This study showed that economic deprivation, cultural norms, gender imbalances, partying or combinations of these may have a great impact on risky sexual behaviour among adolescent blood donors. The HBM and TRA cannot explain and predict sexual behaviour when contextual factors are taken into account. This study revealed that adolescent blood donors may not be rational as understood in these two models. This may be due to several factors: economic deprivation, gender imbalances and age mixing.

This study has revealed that the party environment creates an implicit peer pressure which may tilt sexual behaviour, towards risky sexual practices which are not consistent with social norms of behaviour. In addition, adolescent blood donors who go to parties may forget about STIs when they are at these parties. Behavioural theories cannot predict behaviour of adolescent blood donors when they are at nocturnal parties.

Culture shapes sexual behaviour. Cultural practices such as *chiramu*, may reduce age at first sexual debut. However, such sexual debut is not always under voluntary control, and cannot be explained by behavioural models. The same applies to economic deprivation. Poverty does not select adolescents on the basis of blood donor status. Economically deprived male and female adolescent blood donors may be coerced into early sex by sugar mummies and sugar daddies who provide them with basic necessities. In such relationships, abstinence cannot be talked about. Adolescent participants viewed them as "help me and I help you relationships". Owing to power imbalances, condom negotiation may be difficult for the adolescents. In some cases, more money is given for having unprotected sex. Hillier et al. (1998) asserted that condom negotiation is even difficult for the female adolescents due to cultural norms governing sexual behaviour that prescribe them to be naive during sex while men determine what happens during the sexual encounter. In tertiary institutions, some female adolescents reported of challenges from lecturers who may want sexual favours in return for a pass mark.

Contextual factors expose the short-comings of behavioural models, especially the Theory of Reasoned Action which assumes that people are always rational. Now I turn to the ABC model which is based on the two models given above.

6.6 The ABC Model for HIV prevention in Zimbabwe – a critique

Zimbabwean HIV health prevention efforts are hinged on the behavioural HIV health promotion model: the ABC model. Public health promotion is based on abstaining from sex, being faithful to one trusted partner and consistent use of condoms in irregular or casual sexual relationships.

The ABC model subscribes to the assumption that people are rational, and make key decisions with regards to their sex lives (Dworkin & Ehrhardt, 2007). However, this model ignores the context in which behaviour change is predicated. This could have a significant bearing on the success of this model. This study has shown that the context

may be shaped by gender-power imbalances, economic and cultural factors. I examine the ABC model's three pillars: abstinence, be faithful and condom use.

Although abstinence from sex is advocated by the ABC model, not all people debut sex willingly and form their decision making as advocated by the model. This study revealed that some female adolescents may succumb to various tactics used by some men to get unprotected sex. These range from flattery and subtle rape to partner violence and accusations. Moreover, Shona cultural factors such as *chiramu*, though not reported in this study, are examples of rape that is concealed in culture. The study also revealed how economic deprivation, partying, sexual exploitation in tertiary institutions and peer pressure may "force" adolescent blood donors to debut sex at an early age. Having said this, abstinence in the ABC model may be attained in theory but not in practice. The ABC model therefore suits a utopian context where there are no contextual factors described above.

Faithfulness to a trusted partner may not always guarantee protection against HIV infection. Faithfulness offers little protection to those adolescent blood donors whose sexual partners are either infected with the virus already or have other sexual partners. This is because nobody asks the HIV status of a partner before committing to a relationship. The NAC (2006) observed that even marriages which are supposedly founded on faithfulness and trust have ceased to be protective against HIV/AIDS. The same can be said about adolescent blood donors who are in sexual relationships. Faithfulness is based on trust. However, trust has also shown that condom use declines in long term relationships. The ABC model is therefore self-defeating. Already adolescent blood donors tend to trust their peers are HIV negative.

Consistent and correct use of condoms is advocated by the ABC model. However, the study has shown that condoms are inaccessible to adolescent blood donors from shops. Moreover, adolescent blood donors lack practical skills on condom use. In addition, economic circumstances have been shown to have a greater negative impact on condom use through encouraging age mixing.

Abstinence is the safest way to prevent HIV infection, and it can only be the easy choice when contextual factors facing adolescent blood donors are addressed. Addressing contextual factors including socio-economic and cultural factors may be the best strategy for ensuring safer sexual behaviour choices. However, successful efforts to make "safer choices the easy choices" are slim because the current model turns a blind

eye to the devastating effects of contextual factors on adolescent blood donors. By taking a narrow view of the factors that impact on decision making, even amongst blood donors who are tested regularly for HIV, the ABC model ignores gender-power contexts in which adolescents try to shape their sexual behaviour. Moreover, economic duress and pressure to pass exams make it difficult for female adolescents to insist on condom use. This is more likely since more money is promised after having unprotected sex.

6.7 Policy recommendations and implications for public health practice

I present the recommendations aimed at addressing both contextual factors and individual factors. There is a need for/to:

- Adopt a model which unlike the ABC model, addresses contextual factors.
- Integrate the National Blood Policy within those government policies that have the potential to improve blood safety.
- Provide a guiding framework for those churches and religions that encourage marriages between young girls and elderly men.
- The NBSZ to scale up efforts to keep in touch with potential/current donors within their communities through the establishment of dedicated health masters in schools.
- The NBSZ to revise their pre-donation counselling questionnaire in line with the possible risk of MTCT among adolescent blood donors.
- The NBSZ to organise periodic seminars for high schools where the values of being a blood donor as well as safe behaviour values are inculcated in this group.
- The Government of Zimbabwe to adopt the 1999 Nziramasanga Commission which advocated for a paradigm shift from academic based curricula towards diversified curricula that cater for students of different learning capabilities. This will see the emergence of different trades (carpenters, fashion designers, painters, and mechanics) of people who can earn a living independent of other people.
- Take advantage of Ministry of Youth, Indigenisation and Employment creation to establish vocational training centres for youths throughout the country. Those who graduate from these institutions will be given loans to start self-help projects. This will reduce the rate of unemployment.
- Re-introduce government grants to make education accessible at the tertiary level. This may reduce the rate of prostitution for the purpose of getting tertiary fees.
- Encourage public-private partnerships in which the Government of Zimbabwe can engage real estate organisations such as Old Mutual to build halls of residence for

students. The estate agents will benefit from rentals while the tertiary institutions benefit when their students are adequately housed in decent and collegial environments where their activities can be regulated.

- Enforce regulations in places that host nocturnal parties for young people by imposing deterrent fines on errant businessmen who turn a blind eye to government regulations on legal age for consumption of alcohol.
- Enforce regulations to stop piracy of pornographic material on the streets.
- Mainstream gender from primary level through the development of gender responsive teaching material.
- Integrate condom education within the life skills programme.

6.8 Limitations and strengths of the study

Some limitations remain: the results from this study cannot be generalised to the whole population of adolescent blood donors. I enrolled a sample size of 14 participants due to time and budgetary constraints. This made it impossible to make comparisons between adolescent participants by variables such as place of residency (rural/urban areas or by provinces).

It would have been interesting had I described sexual behaviour among adolescent blood donors deferred from giving blood on grounds of HIV infection. This would have had the potential to pin-point what made them sero-convert. It would have taken me a lot of time to get these. As a result, I resorted to a sampling strategy which made it impossible to get such potentially information-rich cases. By selecting active donors, the potential pitfall was an analogy of *healthy worker effect*.

For ethical considerations, it was impossible to include adolescents under 18 years. It is quite possible that this is the group with the highest incidence of HIV infection. However, it is important to note that adolescent participants past this age were in a better position to describe sexual behaviour.

Two forms of bias cannot be ruled out in this study. These are recall and social desirability bias. Recall bias relates to adolescent blood donors forgetting about their previous risky sexual practices. However, this type of bias may be minimal for regular blood donors since they give blood almost every three months. It would be easy to recall risky behaviour done within such a period.

Social desirability bias refers to the tendency of study participants to give responses that are in line with social norms instead of responses that reflect their behaviour (Grimm, 2010). It may stem from the social standing ascribed to adolescent blood donors. They are esteemed by society as individuals with a low risk for HIV. Social desirability bias is augmented by the fact that all the adolescent participants identified themselves as Christians. Christians are supposed to abstain from risky sexual behaviour in line with their religious doctrine. Thus, most adolescent participants may have considered themselves to have no risk of HIV infection. Another form of social desirability bias may have stemmed from the reluctance by adolescent participants to divulge their sexual behaviour to a stranger during the interviews.

Turning now to the strengths, I minimised social desirability bias through use of presupposition and validation questions to get reliable responses. Moreover, I carried out a validity test of results to reduce social desirability bias. Data for this study were obtained from adolescent participants as well as from the key informants. This was a form of data triangulation to enhance the validity of the findings.

I believe that the results for this study, to a lesser extent, depict what is happening in the study population. I ensured rigour of results through use of both manual and *NVivo* coding. This was a way of method triangulation. In addition, I managed to reach the saturation point where the themes started to recur. Moreover, adolescent participants described their sexual behaviour as well as that of their peers.

Sexual behaviour is a complex phenomenon. This study managed to explore and capture both individual factors and contextual factors through use of a hybrid of the proximal determinant model and the social production of disease theory. Moreover, I used a qualitative methodology which to my understanding, has explored this phenomenon in depth. This approach gave participants a platform for their voices to emerge, so they could give nuanced descriptions that were rich in detail. Furthermore, by probing the participants during interviews, I was able to do cross comparisons of sexual behaviour by sex and to establish linkages and idiographic causation of certain sexual behaviour. This is impossible with quantitative approaches which tend to limit participants' responses to premeditated questions in surveys. I am convinced that a quantitative methodology would not have explored the complexity of sexual behaviour. This is evidenced by their "silence" on sexual behaviour. Henceforth quantitative research may

start to move towards researching sexual behaviour among adolescent blood donors since this study may have provided them with focus.

6.9 Incident HIV among adolescent blood donors – other possible explanations

I give other possible explanations for incident HIV infection. These are unprotected sex, recruitment of new blood donors and mother to child transmission of HIV.

In light of the influence of contextual factors, risky sexual behaviour cannot be ruled out among adolescent blood donors. This study showed that adolescent blood donors may not use condoms when HIV risk is perceived to be low. Perhaps this explains Gwanzura et al.'s (2002) observation of a high prevalence of HSV-2 among regular blood donors. It is possible that even regular blood donors indulge in either unprotected sex or inconsistent and/or incorrect use of condoms. Given that adult donors, who are most likely to have practical skills on condom use, had the highest prevalence of HSV-2, I ruled out, though not in entirety, incorrect use of condoms. This left me with two explanations: either condoms are not used or are used inconsistently in some of the sexual relationships. Older blood donors are likely to be married and may not use condoms consistently. For this reason, both NAC (2006) and Magadi and Desta (2011b) observed that marriage is no longer protective against HIV infection. However, among the adolescent blood donors, who are predominantly single, inconsistent use of condoms is worrisome.

The inverse relationship between HIV incidence and blood donor age creates an interesting contrast with the prevalence of HSV-2 observed among blood donors. This contrast provides yet another avenue to explain high incidence of HIV infection among adolescent blood donors. Since HSV-2 is not screened in donated blood, those donors with latent or sub-clinical infections are not deferred, and may continue to give blood. This could explain the positive association between HSV-2 and blood donor age (Gwanzura et al., 2002). Moreover, this implies that blood donors may not disclose some risky sexual behaviour during pre-donation screening interviews. Inconsistent use of condoms makes sexual behaviour among blood donors to be similar to that of their peers in the general population.

This study revealed that generally male adolescent donors may be forced into unprotected sex by their female partners who may be either blood donors or not. Unprotected sex was used by female partners as a way to prove they are trusted and as a

tactic to get pregnant. These findings confirm both Rhodes and Cusik's (2000) findings that generally unprotected sex is considered to be a sign of a "complete and permanent relationship" by females, and Gregson et al.'s (2002) findings that some females use pregnancy as a means to get married. Gregson et al. (2002) further attributed early marriages to cultural expectations for females to get married earlier than male adolescents.

Permanent deferrals of blood donors who test positive for HIV infection may explain the decrease in the incidence of HIV as age increases. Equally, blood donors who suspect previous exposure to HIV infection may self-exclude or defer themselves from giving blood as age increases. Thus, permanent deferrals serve to "filter out" HIV positive blood donors as age increases.

The entrance of new donors into the blood donor pool may explain the high incidence of HIV. An aggressive recruitment of new blood donors was partly enhanced by a huge capital injection from the Centres for Disease Control/US Presidential Emergency Plan for AIDS Relief programme (NBSZ, 2011). In 2011, new blood donors, mostly adolescents, contributed 43% of total blood collections (NBSZ, 2011). However, Mapako et al. (2013) observed that new blood donors are three times more likely to have a risk of HIV infection than regular blood donors (RR=3.1, 95% CI, 2.9-3.3).

Although stringent pre-donation screening interviews are in place to exclude new blood donors with risk factors for HIV, maintaining a balance between massive recruitment of and quality of new blood donors may be elusive. Pressure to meet collection targets may strain the selection process leading to some "leakages" of HIV positive new donors into the blood donor pool. In this study, key informants mentioned that some adolescent donors who acquired HIV from their parents entered and exited the blood donor pool as new blood donors. This confirms both Ferrand et al.'s (2010) and Gregson et al.'s (2002) findings of HIV sero-positivity among adolescents who reported *never had sex* and no history of STIs. The current cohort of adolescent donors was born around 1993-1997, when the national HIV incidence was highest (NAC, 2006). Ironically, this is the period when ARVs were not available to reduce MTCT (refer to section 1.1).

Chapter 7: Conclusion

In this study I sought to identify sexual behaviour and practices among adolescent blood donors as well as the contextual factors that impact on the risk of HIV incidence in this group. Most adolescent blood donors had safe sexual behaviour choices such as abstinence. This was an important finding for a group which lacks practical skills on condom use. Abstinence is the safest way to prevent STIs, and is the best way to guarantee the safety of blood supplies.

Adolescent blood donors still have a risk of contracting HIV. Despite their reporting no risk perception of the infection, they showed great acceptability of unprotected sex when HIV risk is low. Again, this was an important finding in the sense that condoms may not be used in sexual encounters with people whom they perceive to have a low risk of HIV. These are either fellow blood donors whom they “trust” or their sexual partners whom they know or perceive to have tested negative for HIV antibodies at VCTs. All these factors can shape their behaviour towards unprotected sex. This may expose them to STIs, some of which increase chances for contracting HIV infection.

Contextual factors such as socio-economic and cultural norms have a greater impact on shaping sexual behaviour than individual behaviour factors among adolescent blood donors. Sexual behaviour among this group may be similar to that of their peers in the general population when contextual factors are taken into account. While social status as blood donors and periodic screening of donated blood were protective against risky sexual behaviour, contextual factors, including economic deprivation, partying, age and gender imbalances and sexual exploitation of female students by lecturers negated the protective effects mentioned above. Casual religion was not protective against risky sexual behaviour.

Contextual factors greatly impact on sexual behaviour among adolescent blood donors. This group of donors is in constant tension: on the one hand, they want to keep their blood safe; on the other hand, they face complex life situations that may affect them from adopting safe behaviour choices. This suggests that the ABC model may not protect adolescent donors against risky sexual behaviour choices. The complexity of their socio-economic environment may make it difficult for adolescent blood donors to make safer choices the right choices.

The incidence of HIV infection among adolescent blood donors could be reversed when there is socio-economic empowerment especially of female adolescents, gender and age imbalances are addressed and adolescent blood donors are taught about other STIs within the blood donors that can pose risk to their health.

7.1 Scope for further study

There is need for large scale quantitative research (prospective cohort) exploring condom use, age mixing, multiple concurrency and casual sex among adolescent blood donors. Such a study needs to disaggregate data on HIV incidence by age or number of donations. Equally, there is need to use binary logistic regression methods to ascertain the predictive effect of these variables on incident HIV infection. This may help in prioritising variables when coming up with interventions. To reduce social desirability bias, such a study may make use of either the informal confidential voting interview (Gregson et al., 2004) whereby participants answer sensitive questions on their sexual behaviour using the secret ballot system. Alternatively, audio computer assisted interview techniques (van de Wijgert et al., 2000) which guarantee the anonymity of participants can be used to answer questions on sexual behaviour.

The gender disparity in the incidence of HIV infection and sexual behaviour warrants the need to re-analyse the interview transcripts for this study using feminist lenses. Equally, a qualitative study in which recently deferred HIV positive adolescent blood donors are interviewed, may be used to pin-point the factors that led to sero-conversion.

Since fear of HIV infection is protective against risky sexual behaviour, there is need to look at qualitative exploratory studies aimed at improving donor retention. Such studies need to look at age specific motivational factors. This may ensure that blood supplies are safe and adequate. Equally, there is need to ascertain adolescents' sexual behaviour after visiting voluntary counselling and testing centres with their sexual partners.

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List of appendices

Appendix A: Ethics approval from Auckland University of Technology Ethic Committee



22 July 2013

Penny Neave
Faculty of Health and Environmental Sciences

Dear Penny

Re Ethics Application: **13/115 Sexual behaviour and practices among adolescent blood donors in Zimbabwe.**

Thank you for providing evidence as requested, which satisfies the points raised by the AUT University Ethics Committee (AUTECS). Your ethics application has been approved for three years until 16 July 2016. As part of the ethics approval process, you are required to submit the following to AUTECS:

- A brief annual progress report using form EA2, which is available online through <http://www.aut.ac.nz/researchethics>. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 16 July 2016;
- A brief report on the status of the project using form EA3, which is available online through <http://www.aut.ac.nz/researchethics>. This report is to be submitted either when the approval expires on 16 July 2016 or on completion of the project.

It is a condition of approval that AUTECS is notified of any adverse events or if the research does not commence. AUTECS approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

AUTECS grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to obtain this. If your research is undertaken within a jurisdiction outside New Zealand, you will need to make the arrangements necessary to meet the legal and ethical requirements that apply there.

To enable us to provide you with efficient service, please use the application number and study title in all correspondence with us. If you have any enquiries about this application, or anything else, please do contact us at ethics@aut.ac.nz.

All the very best with your research,

Kate O'Connor
Executive Secretary **Auckland University of Technology Ethics Committee**
Cc: **Collins Timire** timirecollins@yahoo.co.nz

Appendix B: Collaborative letter of agreement between AUT and NBSZ



NATIONAL BLOOD SERVICE ZIMBABWE

Harare: Mazoe Street North, P.O. Box A 101 Avondale Tel: 04-251851, 251854, 251855/6 Fax: 263-4-707820
Toll Free: 0800 4116

August 28, 2013

Dr Penny Neave

Lecturer
Department of Community Health Development
AUT University
Auckland
New Zealand

Dear Dr Penny Neave,

Ref: Letter of collaboration on the study topic: Sexual behaviour and practices among adolescent blood donors in Masvingo and Harare provinces, Zimbabwe.

This is to acknowledge the receipt of your letter dated 20 August 2013 of introduction for the above subject.

Kindly note we have reviewed the request and we are happy to advise that the Service shall assist him in the conduct of his home located research (HLR) on the selected topic. He shall be working with the undersigned who shall also be acting as the academic coordinator during the research period.

Through this letter, Collins Timire shall engage the undersigned for appropriate project commencement arrangements. Kindly note that the Service student support framework requires the student to furnish the organization with a final copy of the study dissertation and looking forward to receiving this.

The Service is pleased to collaborate with your institution on this research and any other future research project opportunities.

Yours faithfully,

Tonderai Mapako
Planning, Information and Research Manager

cc:

Mr.D. Mvere: Chief Executive Officer -NBSZ

Mr. Z. Musekiwa: Finance and Administration Manager-NBSZ

Mr. M. Mutenherwa: Principal Officer – Planning, Information and Research Department

Safe Blood from vein to vein

ALL CORRESPONDENCE TO BE ADDRESSED TO THE CHIEF EXECUTIVE OFFICER

Appendix C: Ethics approval from the Medical Research Council of Zimbabwe

Telephone: 791792/791193
 Telefax: (263) - 4 - 790715
 E-mail: mrcz@mrcz.org.zw
 Website: <http://www.mrcz.org.zw>



Medical Research Council of Zimbabwe
 Josiah Tongogara / Mazoe Street
 P. O. Box CY 573
 Causeway
 Harare

APPROVAL

Ref: MRCZ/B/548

26 August, 2013

Collins Timire
 Auckland University of Technology
 Faculty of Health and Environmental Studies
 Private Bag 920 06
 Auckland 1002, New Zealand

RE: Sexual behaviour and practices among adolescent blood donors in Zimbabwe

Thank you for the above titled proposal that you submitted to the Medical Research Council of Zimbabwe (MRCZ) for review. Please be advised that the Medical Research Council of Zimbabwe has **reviewed** and **approved** your application to conduct the above titled study. This is based on the following documents that were submitted to the MRCZ for review:

- a) Study Proposal
- b) Consent forms (English and Shona)
- c) Data Collection Instruments for adolescents and Key Informants (English and Shona)
- **APPROVAL NUMBER** : **MRCZ/B/548**

This number should be used on all correspondence, consent forms and documents as appropriate.

- **TYPE OF MEETING** : **Expedited**
- **EFFECTIVE APPROVAL DATE** : **26 August 2013**
- **EXPIRATION DATE** : **25 August 2014**

After this date, this project may only continue upon renewal. For purposes of renewal, a progress report on a standard form obtainable from the MRCZ Offices or website should be submitted three months before the expiration date for continuing review.

- **SERIOUS ADVERSE EVENT REPORTING:** All serious problems having to do with subject safety must be reported to the Institutional Ethical Review Committee (IERC) as well as the MRCZ within 3 working days using standard forms obtainable from the MRCZ website.
- **MODIFICATIONS:** Prior MRCZ and IERC approval using standard forms obtainable from the MRCZ website is required before implementing any changes in the Protocol (including changes in the consent documents).
- **TERMINATION OF STUDY:** On termination of a study, a report has to be submitted to the MRCZ using standard forms obtainable from the MRCZ website.
- **QUESTIONS:** Please contact the MRCZ on Telephone No. (04) 791792, 791193 or by e-mail on mrcz@mrcz.org.zw or mrc.zimbabwe@yahoo.com

Other

- Please be reminded to send in copies of your research results for our records as well as for Health Research Database.
- You're also encouraged to submit electronic copies of your publications in peer-reviewed journals that may emanate from this study.

Yours Faithfully

MRCZ SECRETARIAT
 FOR CHAIRPERSON
 MEDICAL RESEARCH COUNCIL OF ZIMBABWE

