

MIDLANDS STATE UNIVERSITY



FACULTY OF SOCIAL SCIENCES

DEPARTMENT OF PSYCHOLOGY

**PREVALENCE AND PREDICTORS OF HIGH RISK SEXUAL BEHAVIOURS AMONG
UNDERGRADUATE UNIVERSITY STUDENTS AT MIDLANDS STATE UNIVERSITY.**

BY

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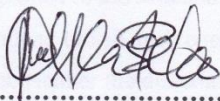
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DEDICATION

This piece of work is dedicated to Jesus, my best friend forever and always.

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ABSTRACT

The highest number of new HIV infections in Zimbabwe are recorded in the 20-29 age group, with most being through heterosexual transmission. University students are a sub-population within this age group, and are key in HIV prevention efforts as they tend to engage in risky sexual behaviours. This study sought to determine the prevalence of high risk sexual behaviours among undergraduate university students at Midlands State University, and determine the predictive value of alcohol use, childhood sexual abuse, and sexual debut for each high risk sexual behaviour. The research adopted an analytical survey design, and data were collected using a self-administered questionnaire given to a sample of 381 students selected using clustered random sampling. Logistic regression analyses were done to determine the significance of each predictor variable. 65.62% of the students in the sample had some sexual experience, with most reporting inconsistent condom use and multiple sexual partnerships. Transactional sex and intergenerational sex were less prevalent among the students. Higher frequency of alcohol consumption was associated with greater likelihood of multiple sexual partnerships and intergenerational sex, while more frequent heavy episodic drinking predicted inconsistent condom use and transactional sex. Childhood sexual abuse predicted multiple sexual partnerships, and increased the likelihood of intergenerational sex by seven times and transactional sex by four times. Lower age at sexual debut was associated with higher likelihood of inconsistent condom use and multiple sexual partnerships. Findings emphasise the necessity of sexual and reproductive health programs targeting teenagers to prevent early sexual debut. Screening for childhood sexual abuse would be useful in HIV prevention, and there is need for interventions designed specifically for students who consume alcohol.

TABLE OF CONTENTS

Approval form	ii
Release form.....	iii
Dedication	iv
Acknowledgements	v
Abstract	vi
Table of contents	vii
List of tables	xi
List of figures	xii
List of acronyms.....	xiii
CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY	1
1.1 Introduction	1
1.2 Background to the study.....	1
1.3 Statement of the problem	4
1.4 Purpose of the study	4
1.5 Research objectives	5
1.6 Research questions	5
1.7 Significance of the study	5
1.8 Assumptions	6
1.9 Delimitations	7
1.10 Limitations	7
1.11 Key terms	7
1.12 Chapter summary	8
CHAPTER TWO: LITERATURE REVIEW	9
2.1 Introduction	9
2.2 The university setting.....	9
2.3 High risk sexual behaviours	10
2.3.1 Inconsistent condom use.....	11
2.3.2 Multiple sexual partnerships.....	12

2.3.3	Intergenerational sex.....	12
2.3.4	Transactional sex	13
2.4	Prevalence of high risk sexual behaviours among university students	14
2.5	Predictors of high risk sexual behaviours	17
2.5.1	Alcohol consumption and high risk sexual behaviours	19
2.5.2	Sexual debut and high risk sexual behaviours.....	20
2.5.3	Childhood sexual abuse and high risk sexual behaviours	21
2.6	Theoretical framework	22
2.6.1	Multi-system perspective.....	22
2.6.2	Problem behaviour theory	23
2.7	Knowledge gap.....	24
2.8	Chapter summary	24
CHAPTER THREE: METHODOLOGY		26
3.1	Introduction	26
3.2	Research paradigm	26
3.3	Research design.....	27
3.4	Population.....	27
3.5	Sample size.....	28
3.6	Sampling method.....	28
3.7	Research instruments.....	29
3.8	Data collection procedure.....	31
3.9	Data analysis	31
3.10	Ethical considerations	32
3.11	Chapter summary	32
CHAPTER 4: DATA PRESENTATION, ANALYSIS AND INTERPRETATION		33
4.1	Introduction	33
4.2	Demographic profile of the sample	33
4.3	Initiation of sexual activity.....	34
4.4	Number of sexual partners	35
4.5	Consistency of condom use.....	38

4.6	Alcohol use.....	39
4.7	Childhood sexual abuse.....	40
4.8	Transactional sex.....	41
4.9	Intergenerational sex	42
4.10	Logistic regression analyses.....	42
4.10.1	Logistic regression analysis results for inconsistent condom use.....	43
4.10.2	Logistic regression analysis results for lifetime multiple sexual partnerships	44
4.10.3	Logistic regression analysis results for multiple sexual partnerships in the last year .	44
4.10.4	Logistic regression analysis results for transactional sex	45
4.10.5	Logistic regression analysis results for intergenerational sex.....	46
4.11	Chapter summary	47
CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS.....		48
5.1	Introduction	48
5.2	Prevalence of high risk sexual behaviours at midlands state university	48
5.2.1	Sexually experienced students.....	48
5.2.2	Prevalence of inconsistent condom use	49
5.2.3	Prevalence of multiple sexual partnerships	50
5.2.4	Prevalence of transactional sex.....	50
5.2.5	Prevalence of intergenerational sex	50
5.3	Predictors of high risk sexual behaviours	51
5.3.1	Relationship between alcohol use and high risk sexual behaviours.....	51
5.3.2	Relationship between childhood sexual abuse and high risk sexual behaviours.....	52
5.3.3	Relationship between sexual debut and high risk sexual behaviours	53
5.4	Conclusions	54
5.5	Recommendations	55
5.6	Chapter summary	55
REFERENCES.....		57
APPENDIX A: RESEARCH INSTRUMENT		65

APPENDIX B: REQUEST FOR APPROVAL TO COLLECT DATA 67
APPENDIX C: APPROVAL LETTER FOR DATA COLLECTION 68
APPENDIX D: AUDIT SHEET 69
APPENDIX E: TURNITIN REPORT 70
APPENDIX F: MARKING GUIDE 71

LIST OF TABLES

Table 1: Demographic characteristics of the sample (N=381)	33
Table 2: Number of sexual partners among the sexually experienced (N=250).....	36
Table 3: Logistic regression analysis predicting the likelihood of inconsistent condom use	43
Table 4: Logistic regression analysis predicting the likelihood of multiple sexual partnerships.....	44
Table 5: Logistic regression analysis predicting the likelihood of multiple sexual partnerships in the 12 months prior to the study.....	45
Table 6: Logistic regression analysis predicting the likelihood of transactional sex	46
Table 7: Logistic regression analysis predicting the likelihood of intergenerational sex.....	47

LIST OF FIGURES

Figure 1: Sexual experience	34
Figure 2: Sexual debut.....	35
Figure 3: Lifetime sexual partners	37
Figure 4: Sexual partners in the 12 months prior to the study.....	37
Figure 5: Consistency of condom use	38
Figure 6: Alcohol consumption.....	39
Figure 7: Heavy episodic alcohol consumption	40
Figure 8: Childhood sexual abuse	41
Figure 9: Transactional sex.....	41
Figure 10: Intergenerational sex.....	42

LIST OF ACRONYMS

HIV	Human Immunodeficiency Virus
AIDS	Acquired Immune Deficiency Syndrome
PLHIV	People living with HIV
UNAIDS	Joint United Nations Programme on HIV/AIDS
NAC	National AIDS Council
ZNASP	Zimbabwe National HIV and AIDS Strategic Plan
UNICEF	United Nations Children's Fund
CDC	Centre for Disease Control and Prevention
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

This study was carried out with the intention to determine the prevalence of high risk sexual behaviours among university students at Midlands State University, located in Gweru, Zimbabwe. It was also the aim of the study to describe the factors that predict high risk sexual behaviours among these students. This chapter gives a background to the problem under study, and justifies the significance of the study. The assumptions, limitations and delimitations are also highlighted, and the objectives and research questions that guided the study are given. The key terms used in the research are also defined in this chapter.

1.2 BACKGROUND TO THE STUDY

In spite of worldwide efforts and the investment of billions of dollars a year in prevention programmes, HIV remains a serious global issue, with an estimated 35 million people living with HIV (PLHIV) as of 2013, and 2.1 million new infections worldwide in that year according to estimates by the Joint United Nations Programme on HIV/AIDS (UNAIDS, 2014). The epidemic has been referred to as, "...one of the most destructive epidemics of modern times" (UNAIDS, 2013 p. 1). While there is not a single country or region that remains unaffected, sub-Saharan Africa has been hardest hit by the epidemic, with over two-thirds of PLHIV living in sub-Saharan Africa (UNAIDS, 2014). The region contributes an estimated 70% of all new HIV infections (UNAIDS, 2014). It follows that continued strategic HIV interventions must be implemented in this region towards the eradication of HIV. Six percent (6%) of people living with HIV in sub-Saharan Africa are found in Zimbabwe (UNAIDS, 2014). There is a need for sustained interventions targeted at lowering HIV transmission in Zimbabwe if the goal of zero new HIV infections (UNAIDS 2013), and an end to the HIV epidemic, is to be reached.

In designing HIV interventions, programmes targeted at specific at-risk population sub-groups are needed. UNAIDS (2014) spells out a new paradigm in HIV prevention and management, based on the finding that there exist local diversities in the AIDS epidemic, affecting different locations and populations uniquely. This paradigm calls for the development of targeted HIV

interventions that are informed by the unique characteristics of sub-epidemics within different population groups and different localities. That is to say, the transmission of HIV in different localities and among different population groups is driven by varying factors, and such factors need to be understood through research and become the basis for interventions directed at these different localities and population groups. Chanakira, O’Cathain, Goyder, and Freeman (2014) are strongly in support of population sub-group-specific interventions, as they state that the factors that contribute to HIV transmission are unique to specific population groups and locations, hence the need to understand such intervening factors as they occur in specific population groups in order to develop and implement focussed high-impact HIV prevention programmes. Such an approach allows for targeted, high-quality HIV prevention and management services that are also cost-effect (UNAIDS, 2014).

The HIV epidemic in Zimbabwe is largely sexually driven, with sexual transmission contributing 80% of all new HIV infections (National AIDS Council, NAC 2011). Zimbabwe’s National AIDS Council (NAC, 2011) also reports that the majority of new HIV infections in the country are in the 20-29 age group. These statistics reflect a need for HIV prevention programs that are targeted at the 20-29 age group, and that aim to reduce sexual transmission of HIV. In line with this, the National response strategy in Zimbabwe has had as its key intervention social and behaviour change communication (UNAIDS, 2014) to encourage the adoption of safe sex practices and discourage high risk sexual behaviours such as unprotected sex, multiple sexual partnerships, sex with sex workers, casual sexual relations, and intergenerational sexual relationships (UNAIDS, 2013). In addition, young people between the ages of 15-29 are identified as a key population group in HIV prevention efforts in the Zimbabwe National HIV and AIDS Strategic Plan (ZNASP) (NAC, 2011). Undergraduate university students fall within this key population group, as most of them are within the 15-29 age range. It is on this population subgroup that this research focussed.

Enrolment in university often brings with it increased freedom and independence (United Nations Children’s Fund, UNICEF 2011), as young people move away from home and experience greater self-governance and liberty from parental surveillance. According to Bailey, Haggerty, White and Catalano (2011), research has shown that risky sexual behaviour tends to peak in the late teens and early twenties period, as leaving home reduces parental monitoring and

is often associated with an increase in risky sexual behaviour. This stage of development also co-occurs with the formation of committed romantic relationships, and young people are faced with choices concerning their sexuality and reproductive health. University students tend to use their increased freedom to engage in risky sexual behaviour (Chanakira et al, 2014). Research conducted on fourth year students at Bindura State University in Zimbabwe by Katsinde, Chidyamatamba and Katsinde (2011), supports this assertion, as it showed that an overwhelming majority (96%) of these university students were sexually active, with most of them reporting risky sexual behaviours such as inconsistent condom use and having multiple concurrent sexual partners.

Despite the apparent need for HIV prevention programmes aimed at university students, there seems to be little by way of research and targeted interventions that focus on this subpopulation group. Magu, Wanzala, Mutugi and Ndahi (2012) point out that there is limited published data on HIV-related risk behaviour among university students in Africa. Chanakira et al (2014) concur with this in saying that there has been very little research done on university students as a population group, and yet the sexual behaviours that place this population group at risk of HIV infection need to be understood. In addition to limited research on university students' sexual risk behaviours, there have been limited prevention programmes specifically focussed on university students (Magu et al, 2012). According to Magu et al (2012), most HIV prevention programmes are aimed at high school students and out-of-school youth. The key intervention in Zimbabwe has been sexual and behaviour change communication, but this has mostly been carried out in communities, workplaces, schools and prisons (UNAIDS, 2014). For this reason, this research explored the prevalence of HIV risk behaviours among university students at a state university in Zimbabwe. The research also investigated the predictors of risky sexual behaviour among university students, to facilitate the development of targeted HIV prevention programmes that are particularly for the sub-population of university students. Chanakira et al (2014) emphasise that sexual behaviour is complex and influenced by many factors, and it was the aim of this research to delve into some of the factors specific to the sexual behaviour of university students.

1.3 STATEMENT OF THE PROBLEM

Zimbabwe has made considerable progress in reducing the spread of HIV over the last decade, and both the prevalence and incidence of HIV have declined over the last 10 years (UNAIDS, 2014). However, the incidence of HIV remains high among young people, with statistics by the National AIDS Council (2014) showing that the highest number of new HIV infections in Zimbabwe are recorded in the 20-29 age group. The vast majority of these new infections are through heterosexual transmission (National AIDS Council, 2011), and high infection rates are a reflection of the occurrence of high risk sexual behaviours among young people aged 20-29. This age group is key in turning the tide in the response to HIV and achieving the goal of zero new HIV infections (UNAIDS, 2013), and there is need for interventions focussed on stopping the sexual transmission of HIV among young people in this age group.

Undergraduate university students are one sub-population that falls within this key age group. Most students when they enter university experience a greater degree of freedom and self-governance (UNICEF, 2011), as they begin to live independent of their parents and guardians. Students at this stage in their lives are also presented with choices concerning their sexuality and relationships. According to Chanakira et al (2014), the independent living and social pressure associated with university education have a negative impact on the sexual behaviour of university students, as these students tend to use the increased freedom to engage in risky and irresponsible sexual behaviour. Such risky choices concerning sexual and reproductive health by university students leave them vulnerable to negative effects such as unplanned pregnancy, contraction of sexually transmitted infections, and the transmission of HIV. There is need for an understanding of the factors that predict risky sexual behaviour among university students for the design of effective HIV prevention programmes targeted at this sub-population group. This study sought to investigate the prevalence of sexual behaviours that place university students at risk of HIV transmission, as well as look into the factors that predict these risky sexual behaviours among undergraduate university students at Midlands State University.

1.4 PURPOSE OF THE STUDY

The study was intended to shed light on the sexual behaviour patterns of university students at Midlands State University by investigating the prevalence of high risk sexual behaviours among them. It was also the aim of the study to describe the factors that predict high risk sexual

behaviours among these students. The researcher will ultimately use these findings to make recommendations on the best approach that HIV prevention programmes can take in targeting university students.

1.5 RESEARCH OBJECTIVES

In line with the purpose of the study, the research had the following objectives:

1. To determine the prevalence of high risk sexual behaviours such as having multiple sexual partners, inconsistent condom use, transactional sex and intergenerational sex among undergraduate students at Midlands State University.
2. To assess the relationship between alcohol consumption and high risk sexual behaviours among undergraduate students at Midlands State University.
3. To analyse the statistical association between childhood sexual abuse and high risk sexual behaviours among undergraduate students at Midlands State University.
4. To determine the relationship between sexual debut and high risk sexual behaviours among undergraduate students at Midlands State University.

1.6 RESEARCH QUESTIONS

The following research questions guided this study:

1. What are the high risk sexual behaviours that undergraduate students at Midlands State University engage in?
2. What is the relationship between drinking alcohol and high risk sexual behaviours amongst undergraduate university students?
3. What is the relationship between childhood sexual abuse and high risk sexual behaviours amongst undergraduate university students?
4. What is the relationship between sexual debut and high risk sexual behaviours amongst undergraduate university students?

1.7 SIGNIFICANCE OF THE STUDY

Knowledge of specific factors that are linked to high risk sexual behaviours among university students is very limited, especially as it relates to Zimbabwean universities. This has resulted in generalised HIV interventions in universities that may be failing to address the key factors that affect university students' sexual behaviour. It is expected that the findings of this research will

benefit Zimbabwe National AIDS Council and its partners in HIV prevention and management, as it allows recommendations on specific interventions that take into consideration the factors that predict high risk sexual behaviours. It is vital that HIV prevention efforts flow from a robust research base for them to have the highest impact. This study provides research-based information on the sexual behaviour patterns of undergraduate university students at a Zimbabwean university, as well as the predictors of university students' sexual behaviours that place them at risk of HIV transmission. These findings may be used to inform HIV prevention and management programmes, which will result in high-impact interventions.

This study will also be of benefit to the academic community. Currently, there is limited literature on the sexual behaviour patterns of university students as well as the factors that predict risky sexual behaviour among this population group, especially in the Zimbabwean context. This study will add to the bank of knowledge on this issue. It is also the hope of the researcher that this research will spur other researchers on to conduct studies on this important area. The findings of this study are also expected to benefit university students, at Midlands State University and beyond, by serving as an eye-opener to the prevalence of high risk sexual behaviours among their peers. Such a realisation might have an influence on their risk perception and motivate them to make safer sexual choices such as limiting the number of sexual relationships they have, and using condoms consistently and correctly with every sexual encounter. Finally, this study also stood to benefit the student who conducted this research, as she had an opportunity to develop her research skills. She also had an opportunity to contribute important knowledge that will assist national efforts to curb the spread of HIV.

1.8 ASSUMPTIONS

In this study, the researcher made use of questionnaires to collect data. A foundational assumption to this research is that participants provided honest responses to the questionnaire items. Even though the information requested related to the sensitive and personal area of sexual behaviour, the researcher expects that participants answered truthfully, as she allowed participants to respond to the questionnaire anonymously and assured them that the information they provided was to be kept confidential.

In making use of a questionnaire to collect data, the researcher assumed that the items in the questionnaire were valid and understandable to all the research participants. The researcher also

assumed that the results obtained in this study could be generalised to the population of undergraduate students at Midlands State University.

1.9 DELIMITATIONS

This study was confined to undergraduate university students at Midlands State University in Gweru, Zimbabwe. Further still, the study was limited to first, second and fourth year students for practical reasons, as most third year students were placed in different workplaces all over the country as part of their work-related learning and would have been difficult to reach. The study included only those undergraduate students enrolled in fulltime study, to the exclusion of all students studying part-time on the visiting or block release program. This was because full-time students were easier to access for questionnaire administration as they spent more time on campus. The study also focussed on specific factors that are potential predictors of high risk sexual behaviours among undergraduate university students. These factors were alcohol consumption, childhood sexual abuse, and sexual debut.

1.10 LIMITATIONS

This study was conducted using an analytical survey research design, which allowed for statistical analysis of the data collected to determine relationships between different variables and high risk sexual behaviours among university students. However, this study cannot be used to infer causation as it is not experimental. In addition, the generalizability of the results of this study to other universities in Zimbabwe may be limited, as the sample was restricted to students at one university in Zimbabwe.

The researcher made use of questionnaires in collecting data, which introduced certain limitations to the research. Firstly, some respondents did not return the questionnaires they were given. Secondly, some responses on the questionnaires were unclear, leaving the researcher with no opportunity to clarify the participants' responses. The questionnaires administered also required respondents to use retrospective self-reporting, as they were giving responses based on behaviours conducted in the past. This may have led to recall bias, which refers to respondents' inaccuracy in the recall of previous events.

1.11 KEY TERMS

This section gives the operational definitions of the key terms that were used in this study.

Undergraduate university students: This term was used to refer to those students enrolled at the university who were studying for an undergraduate degree. As previously mentioned, this study focussed on students enrolled on a fulltime basis.

HIV: Human Immunodeficiency Virus, a virus that weakens an individual's immune system and may lead to Acquired Immune Deficiency Syndrome (AIDS).

High risk sexual behaviour: This phrase referred to behaviours related to sexual activity and sexual health choices which place individuals at greater risk of transmitting or becoming infected with HIV. This includes having multiple sexual partners, inconsistent condom use, transactional sex, and intergenerational sex.

Intergenerational sex: For the purposes of this research, intergenerational sex referred to a sexual relationship between individuals who have an age difference of ten or more years between them. Such an age discrepancy has been associated with increased risk of HIV transmission, as older partners are more likely to have been previously exposed to HIV.

Childhood sexual abuse: In this study, this phrase referred to an individual having experienced any form of forced sexual activity before the age of 12.

Sexual debut: This referred to the age at which an individual had their first voluntary sexual encounter.

1.12 CHAPTER SUMMARY

This chapter served as an introductory chapter, and it gave the background to the study and located the problem in context. The purpose of the study and the objectives of the research were given. The significance of the study and its benefits to Zimbabwe National AIDS Council and its partners in HIV prevention and management, the academic community, university students and the researcher were outlined. The research questions that guided the study were also stated, and the chapter included the delimitations, limitations, and assumptions of the research. Finally, the terms that were key to this study were defined operationally. The following chapter will give a review of literature relevant to this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The preceding chapter outlined clearly the parameters and aims of the study. It is the purpose of this second chapter to provide deeper insight into the area of study by reviewing literature related to the major concepts involved in the research. To accomplish this, first the unique characteristics of the university setup that provide students with opportunity to engage in risky sexual behaviours will be discussed. Following this, the two groups of variables in the study will be explored, that is, high risk sexual behaviours and the predictors of high risk sexual behaviours. The chapter will also include an outline of the theoretical framework that guided the research, clearly identify the knowledge gap that motivated the research, and conclude with a summary of the issues discussed.

2.2 THE UNIVERSITY SETTING

A number of authors have identified factors associated with the university environment that may have an influence on the sexual and reproductive health behaviours of university students. Entrance into university presents students with an environment different from their previous experience. Most undergraduate students enter university straight from high school, and are immediately exposed to the freedom of university life. Imaledo, Peter-Kio and Asuquo (2012) mention that campus life brings with it a high level of personal freedom. This is supported by Bailey et al (2011), who mention that entrance into college is often associated with exit from the parental home and independent living. There is a sudden liberation from parental monitoring and supervised living, as is present for adolescents who stay at home or in boarding school during high school. According to Chanakira et al (2014), this shift may have an effect on university students' sexual behaviour. With the freedom comes opportunities and pressures for sexual activity (Tiruneh, 2004). A study by Tiruneh (2004) showed that young people with low levels of parental supervision are six times more likely to engage in risky sexual activities than those with a high level of parental monitoring. Parental monitoring is a protective factor against risky sexual behaviour (Bailey et al, 2011), and leaving home removes this protective factor. The freedom of

the university setting therefore increases the likelihood of undergraduate students engaging in sexual behaviours that place them at risk of sexually transmitted infections and HIV.

In addition to the freedom and decreased parental monitoring that comes with university, the age at which most undergraduate university students are, also has implications for sexual behaviour. Bailey et al (2011) point out that the years following high school are characterised by change, role exploration and formation of committed relationships. These authors also identify the late teens and early twenties as a period of experimentation, accounting for the peak in risky sexual behaviour at this age. According to UNICEF (2011) the early twenties are associated with increased freedom and independence. It is no wonder then that the highest number of new HIV infections in Zimbabwe are recorded in the 20-29 age group (NAC, 2014), as it seems that young people go on to use this freedom to engage in sexual behaviours that place them at risk of contracting and spreading HIV. Undergraduate university students fall within this age group, and it is on these that the study was focussed. According to Katsinde, Chidyamatamba and Katsinde (2011), the risky sexual behaviours of university students may also stem from the feeling that most students at this stage have, that they are immune to the perils of disease. This sense of invulnerability would result in students engaging in risky sexual behaviours despite their knowing that these behaviours increase their chances of contracting sexually transmitted infections and HIV.

The factors discussed above, such as increased freedom, independent living, freedom from parental supervision, formation of romantic relationships and a feeling of invincibility may all combine to have a negative effect on the sexual and reproductive health choices of undergraduate university students. As they fall in the age group with the highest number of new HIV infections in Zimbabwe (NAC, 2014), it is crucial that HIV prevention efforts target this sub-population of university students. These efforts need to be tailored to the specific context of the university, and to be informed by research on the factors that influence the sexual behaviour of university students. It is to this end that this research was carried out.

2.3 HIGH RISK SEXUAL BEHAVIOURS

The term 'high risk sexual behaviours' refers to any sexual behaviours that place an individual at greater risk of contracting or spreading HIV. HIV is a virus that is present in body fluids such as blood, semen, vaginal fluids and breast milk. According to Centers for Disease Control and

Prevention (CDC, 1999), HIV is transmitted by sexual contact with an infected person, or contact with an infected person's blood, for example through blood transfusion or sharing syringes as with injecting drug users. It can also be transmitted from mothers to their children before or during birth, or during breastfeeding (CDC, 1999). According to UNAIDS (2014), HIV is primarily spread through heterosexual contact in sub-Saharan Africa. This is also true for Zimbabwe, as NAC (2011) reports that over 80% of all HIV infections in Zimbabwe are through sexual transmission, with the majority in the 20-29 age group. The sexual behaviours that account for this heterosexual transmission include unprotected sex, multiple sexual partnerships, sex with sex workers, casual sexual relationships, and intergenerational sex (UNAIDS, 2013). Othieno, Okoth, Peltzer, Pengpid and Malla (2015) also classify having sex under the influence of alcohol as a high risk sexual behaviour. This study focussed on four high risk sexual behaviours that place university students at risk of acquiring or transmitting HIV, that is, inconsistent condom use, multiple sexual partnerships, intergenerational sex, and transactional sex. Each of these high risk behaviours is discussed briefly in the following sections.

2.3.1 Inconsistent condom use

Condoms are an effective way of reducing the chances of HIV transmission during sexual encounters. According to UNAIDS (2013, p. 15), "Consistent condom use remains one of the most effective ways to reduce the sexual transmission of HIV." This is supported by CDC (1999), who explain that condoms act as a mechanical barrier to the virus, and proper and consistent use of condoms greatly decreases the risk of HIV transmission as well as the transmission of other sexually transmitted infections. It is fitting, therefore, that condom distribution and promotion of condom use are key components of Zimbabwe's national response strategy to HIV (UNAIDS, 2014).

It is crucial to note, however, that condoms are only effective as an HIV prevention strategy if they are used correctly and consistently (NAC, 2011). Consistent condom use is defined as the use of a condom at every sexual encounter (Othieno et al, 2015), with inconsistent condom use being the failure to use a condom every time one has a sexual encounter. Homer (2008) identifies some reasons why people fail to use condoms consistently, such as lack of access to condoms, and perceptions that condoms lead to decreased sexual enjoyment. Whatever the reason, sex without a condom allows for direct HIV transmission (Homer, 2008). Inconsistent condom use is

therefore a high risk sexual behaviour, and it was one of the dependent variables that were included in this study.

2.3.2 Multiple sexual partnerships

Multiple sexual partnerships place an individual at greater risk of contracting HIV, and are therefore a high risk sexual behaviour. As said by Katsinde, Chidyamatamba and Katsinde (2011), the risk of HIV infection increases with the number of sexual partners that one has. This is because each new sexual relationship is a possible pathway for HIV transmission. Multiple sexual partnerships can be in the form of concurrent sexual liaisons, which refers to sexual relationships with two or more partners which overlap in time, or serial monogamy, which is having many non-overlapping sexual relationships one after the other (AIDS Support and Technical Assistance Resources, AIDSTAR-One, 2011). Both forms of multiple sexual partnerships lead to an increased risk of HIV infection and transmission. Multi-partner sexual contact, be it concurrent partnerships or serial monogamy, poses great risk for HIV transmission (Tiruneh, 2004). According to Homer (2008) the number of sexual partners that one has, has an effect on their risk of contracting or transmitting HIV, with an increase in the number of partners resulting in an increase in the likelihood of HIV transmission.

2.3.3 Intergenerational sex

The third high risk sexual behaviour that was considered in this study was intergenerational sex. This term was used to refer to a sexual relationship between individuals who have an age difference of ten or more years between them. A considerable age discrepancy between sexual partners has been associated with increased risk of HIV transmission (UNAIDS, 2013). The reason for this is explained by Campbell (2009), who says that intergenerational sex is often risky because older partners are more likely to have had more previous sexual encounters. This means they are more likely to have been exposed to HIV and other sexually transmitted infections (Mulu, Yimer & Abera, 2014). In addition to this, intergenerational relationships tend to result in an imbalance of power in the relationship (Campbell, 2009). This is especially true if the female is the younger partner, making it harder for young women in such relationships to negotiate safer sex and insist on safe sex practices such as voluntary counselling and testing (VCT) and condom use (UNAIDS, 2013). It is for these reasons that intergenerational sex is considered a high risk sexual behaviour.

It is concerning that, despite the risks associated with intergenerational sex, it is reported that intergenerational sexual partnerships are still prevalent in university settings in Africa (Choudhry, Agardh, Stafstrom & Ostergren, 2014). Older male partners involved in these intergenerational relationships are often referred to as ‘sugar daddies’ (Katsinde, Chidyamatamba & Katsinde, 2011). According to Choudhry et al (2014), it is common for university students to have transactional sex with older partners, all the while having a romantic partner closer to them in age on campus. Such reports reflect that these intergenerational sexual relationships might be for the purpose of getting gifts and material favours in return for sex. These sexual relationships place university students at increased risk of contracting HIV.

2.3.4 Transactional sex

The fourth high risk sexual behaviour included in this study is transactional sex. This refers to sex in exchange for material benefit, or the exchange of money or goods for sex (MacPherson et al, 2012). Some authors differentiate between transactional sex and sex with sex workers (Stoebenau et al, 2011; MacPherson et al, 2012), but Robinson and Yeh (2009) refer to sex with sex workers as an extreme end of the continuum of the concept of transactional sex. Sex workers are considered a key population at higher risk of HIV transmission (Katsinde, Chidyamatamba & Katsinde, 2011). According to Tiruneh (2004), sex workers are individuals who regularly engage in sexual relationships in exchange for money. The lifestyle of these individuals is characterised by unrestricted, multiple concurrent sexual partnerships, and often involves alcohol and drug use as well (Tiruneh, 2004). Sex workers are often unable to negotiate safe sex with their clients, and may also fail to access sexual and reproductive health services due to the stigma and negativity that is attached to their lifestyle. The result is that sex workers are vastly more likely to contract HIV. UNAIDS (2014) reports that the HIV prevalence among sex workers is twelve times that of the rest of the population, hence their classification as a key population group. Sexual contact with sex workers therefore is associated with greater risk for HIV infection. Transactional sex may also occur in the context of long-term partnerships (Robinson & Yeh, 2009). Even in such a context, transactional sex poses increased risk for HIV transmission as it shifts the power dynamics in favour of the one giving the money or gifts, so that the receiver is more likely to participate in risky sex (MacPherson et al, 2012). As such, transactional sex was included in this study as a high risk sexual behaviour.

2.4 PREVALENCE OF HIGH RISK SEXUAL BEHAVIOURS AMONG UNIVERSITY STUDENTS

Literature on the prevalence of high risk sexual behaviours among university students is present as it relates to a number of countries across different continents. A study of a sample of undergraduate students at California State University in USA revealed that 71% had had sex before (Flannery & Ellingson, 2003). Results of the same study also showed that 40% of the females and 36% of the males in this study did not use a condom the last time they had sex, revealing indulgence in risky sexual behaviour among these students. In Europe, 83.3% of university students at a university in Portugal reported that they were sexually active, with 57.4% of male students reporting multiple sexual partnerships (Reis, Ramiro, Matos & Diniz, 2013). Among female students at a Swedish university, 99% had had sex before, and 65% reported that they had not used condoms during a first-date sexual encounter (Tyden, Palmqvist & Larsson, 2012). This study by Tyden, Palmqvist and Larsson (2012) also found that the university students had an average of 2.6 sexual partners in the 12 months prior to the study, and an average of 11 lifetime sexual partners. Such results show that a high proportion of university students are sexually active, and a sizeable percentage of them engage in risky sexual behaviours particularly multiple sexual partnerships and inconsistent condom use. Similar results were reported in Australia, with just over 44% of female students at an Australian university reporting inconsistent condom use (Gilchrist, Smith, Magee & Jones, 2012). A survey conducted at a university in China reveals a much lower proportion of students who are sexually active, with findings indicating that 12.6% of the university students had had heterosexual intercourse (Chi, Yu & Winter, 2012).

Results of research done in African countries are similar to those of the studies done in Europe and America referred to above. In a study by Omoteso (2006), 63% of the sample of undergraduate students at a university in southwest Nigeria had had sexual intercourse. At another university in southern Nigeria, just over half the students in the study were found to be sexually active (Imaledo, Peter-Kio & Asuquo, 2012). Only 31.8% of these sexually active students reported using a form of protection during sexual encounters, leaving a high 68.2% of sexually active students who had unprotected sex and were therefore vulnerable to HIV transmission. Mulu, Yimer and Abera (2014) conducted a study on the prevalence of high risk sexual behaviours among full-time undergraduate students at a university in Ethiopia, and found

that 36.4% of students had had sex. In this study, of the sexually active students, 42.7% had multiple sexual partners, 34.3% had sex after consuming alcohol, and 7.4% had sex with sex workers (Mulu, Yimer & Abera, 2014). Only 38% of the sexually active students, less than 2 in 5, used condoms consistently. Again this reflects that those university students who are sexually active tend to engage in high risk behaviours, especially inconsistent condom use. At another Ethiopian university, 28.4% of students were sexually active, and of these 24.5% had multiple partners (Dingeta, Oljira & Assefa, 2012). Inconsistent condom use was also reported with the majority of the sexually active students in this study (Dingeta, Oljira & Assefa, 2012). In concurrence with this, Tiruneh (2004) found that among sexually active young people aged 15-24 in Addis Ababa, 2 in 3 of them either used condoms inconsistently or did not use them at all.

Research conducted among undergraduate students at a university in Uganda showed that 3 in every 5 students had sexual experience (Choudhry et al, 2014). Of these, 33% had had multiple sexual partners in the 12 months before the study. Similarly, the results of research done at the University of Nairobi in Kenya reflected that 30% of sexually active university students had multiple sexual partners (Othieno et al, 2015). Although this study did not bring out the overall percentage of students who were sexually active, it also reported that more than a quarter of sexually active students did not use condoms consistently, and 21% had engaged in sex after taking alcohol in the 3 months prior to the study. At a university in Madagascar, it was found that 80% of the students were sexually active (Rahamefy, Rivard, Ravaoarino, Ranaivoaharisoa, Rasamindrakotroka & Morisset, 2008). Of these sexually active students, 29% had two or more sexual partners. More alarmingly, over 94% of sexually active students at this university reported inconsistent condom use. Additionally, 7.8% of the sexually active students had sex in exchange for money or gifts. This study in Madagascar not only indicates that an overwhelming majority of university students at this university were sexually active, but also shows that a large percentage of these sexually active students engaged in risky sexual behaviours, notably inconsistent condom use and to a lesser extent multiple sexual partnerships and transactional sex. A study by Heeren, Jemmott, Mandeya and Tyler (2012) conducted among students at a university in South Africa, found that about 74% of the students were sexually active. Similarly, Peltzer (2000) reports that 71.2% of female and 85% of male first year students at a university in South Africa were sexually active, and only 35.4% of them said that they used condoms consistently. Porter, Johnson and Petrillo (2009) report a lower proportion of sexually active

South African undergraduate university students, with 46.7% of them sexually active at a university in South Africa, and 58.7% of these reporting multiple sexual partnerships over their lifetime.

The figures vary with different countries, and in some cases they vary between different universities within the same country. While research done in other African countries generally shows a lower percentage of university students who are sexually active than the 80% reported in Madagascar (Rahamefy et al, 2008), it still points to a high proportion of university students being sexually active, and some engaging in high risk sexual behaviours. Overall, it is clear that a considerable proportion of university students are sexually active, and from the literature discussed above a good number of them engage in high risk sexual behaviours.

While literature on the prevalence of high risk sexual behaviours in other countries is somewhat readily available, there appears to be little research on the prevalence of these behaviours in Zimbabwean universities. One of the few studies conducted in this vein was done by Katsinde, Chidyamatamba and Katsinde (2011) at Bindura University of Science Education. The findings of this study indicated that 96% of fourth year university students reported that they were sexually active. Of these, 65% stated that they had more than one sexual partner, and 71% of sexually active respondents reported inconsistent condom use. These findings reflect a very high prevalence of risky sexual behaviours among the university students who took part in the survey. However, this research study was limited to fourth year university students, and so the results cannot be generalised to the entire university population at Bindura University of Science Education, and may not be applicable to other universities in Zimbabwe. According to a study conducted by Nkomazana and Maharaj (2014) among a sample of students from two universities in Zimbabwe, slightly over a third of the sample reported multiple sexual partnerships. Another study conducted among students from two faculties at a Zimbabwean university showed that 82% and 67% of males and females respectively were sexually active (Shumba, Mapfumo & Chademana, 2011). Forty-nine percent of this sample reported having multiple sexual partnerships. The results of these studies done in Zimbabwean universities show that most university students are sexually active, and a high proportion of them engage in risky sexual behaviours. There is therefore need for research to be done in Zimbabwean universities on the

predictors of such risky sexual behaviour, and it is in light of this need that this research was carried out.

2.5 PREDICTORS OF HIGH RISK SEXUAL BEHAVIOURS

Initially in the global response to HIV, most intervention strategies were developed with the intention of increasing knowledge and awareness about HIV, how the virus is spread, risky behaviours that can lead to its transmission, and prevention methods available. The vast majority of prevention efforts thus far have been information-based (Ratliff-Crain, Donald & Dalton, 1999). It was believed that this increase in knowledge would translate to behaviour change as individuals adopted safer behaviours to protect themselves against HIV. However, recent research reflects that knowledge is not necessarily predictive of sexual behaviour. Ratliff-Crain, Donald and Dalton (1999) found with a sample of students at a liberal arts college in the United States of America, that HIV and AIDS knowledge was very high in the sample but did not appear to be related to the extent to which students engaged in high risk sexual behaviours. The same was reported at a Zimbabwean university, as it was found that increased knowledge of HIV and AIDS was not necessarily complemented by a reduction in risky behaviour among fourth year university students (Katsinde, Chidyamatamba & Katsinde, 2011). In commenting on this finding, Katsinde, Chidyamatamba and Katsinde (2011) go on to say that there are “intervening factors and influences” (p. 89) between knowledge and behavioural outcomes.

Indeed, sexual behaviour is complex, and influenced by a number of biological, social, psychological and cognitive factors that are interrelated (Langer, Warheit & McDonald, 2001). It is this realization that there are factors that are stronger predictors of high risk sexual behaviours than simply level of knowledge that has led to the development of an interest in identifying these predictive factors in various populations. Predictors of high risk sexual behaviours may be defined as those factors which increase or decrease the likelihood of engaging in high risk sexual behaviours (Langer, Warheit & McDonald, 2001). The identification of such factors is key in the response to HIV. Since these factors differ in specific population groups (Chanakira et al, 2014), their identification allows for the design of appropriate targeted interventions to reduce the occurrence of high risk sexual behaviours and by extension the heterosexual transmission of HIV (Khalaj Abadi Farahani, Cleland & Mehryar, 2012). As stated by Nkansah-Amankra, Diedhiou, Agbanu, Harrod and Dhawan (2011), targeted interventions are more effective than general

programs because they take cognisance of the specific context-related factors that influence behaviour.

A number of authors have found various predictors of high risk sexual behaviours among university students in different countries. Langer, Warheit and McDonald (2001) found that there was a connection between residential status and sexual behaviour at a state university in Florida in the USA, with students living at home with their families being less likely to engage in risky sexual behaviour than students living in university-provided accommodation. At a Chinese university, it was found that the factor with the strongest predictive power for sexual behaviour among students was having romantic relationship experience, with students involved in romantic relationships being more likely to engage in sexual behaviour than those who were not (Chi, Yu & Winter, 2012). Similarly, a study done at a university in Madagascar showed that 75.6% of students who did not use condoms consistently said it was because they were in a relationship with a steady partner (Rahamefy et al, 2008), reflecting a strong link between being in a romantic relationship and inconsistent condom use. Mulu, Yimer and Abera (2014) found that watching pornographic videos was correlated with being sexually active and having multiple sexual partners among full time undergraduate students at a university in Ethiopia. Their research showed that those students who watched pornographic videos were 2.8 times more likely to have had multiple sexual partners than those who did not.

Of the literature available on the predictors of high risk sexual behaviours among university students, the researcher found only one study that reflected findings from a Zimbabwean university setting. Research by Katsinde, Chidyamatamba and Katsinde (2011) showed that fourth year undergraduate students at a university in Zimbabwe were less likely to use condoms with partners that they trust and are in a long-term relationship with. Again, this points to relationship status as a predictor of inconsistent condom use. However, by and large both the prevalence of high risk sexual behaviours and the predictors of these behaviours among university students are little understood in the Zimbabwean context. This is despite the call for national HIV prevention and management programmes that flow from empirical evidence for highest impact (NAC, 2011). With this study, the researcher attempted to begin to fill this knowledge gap by investigating the prevalence and predictors of high risk sexual behaviours among university students at a state university in Zimbabwe. The researcher specifically looked

at alcohol consumption, sexual debut, and childhood sexual abuse as predictors of high risk sexual behaviours among university students at Midlands State University in Gweru, Zimbabwe.

2.5.1 Alcohol consumption and high risk sexual behaviours

The consumption of alcohol is cited as a predictor of high risk sexual behaviours in many instances. This study included both general alcohol consumption and heavy episodic drinking as measures of alcohol use. Heavy episodic alcohol consumption, or binge drinking, is defined by DeSimone (2010) as consuming five or more alcohol beverages on a single occasion. Nkansah-Amankra et al (2011) found that alcohol use is predictive of high risk sexual behaviours, specifically having multiple sexual partners, among high school students in Colorado, USA. Othieno et al (2015) also found alcohol use to be linked with having multiple sexual partners among undergraduate students at a university in Nairobi, Kenya. The same association between alcohol use and multiple sexual partners was reported at a Ugandan university among undergraduate students (Choudhry et al, 2014). Alcohol use has also been found to be predictive of inconsistent condom use in some studies. According to Sammarco, Ripabelli, Ferrucci and Grasso (2007, p. 57), "...students who regularly use alcohol and drugs are less likely to use condoms, increasing the risk of contracting HIV." Their study at a university in Italy revealed that more than half of the students who had sexual intercourse after alcohol consumption did not use condoms at their last sexual encounter. In support of this, participants in a focus group discussion with fourth year students at a university in Zimbabwe reported that unprotected sex was more likely when individuals had consumed alcohol (Katsinde, Chidyamatamba & Katsinde, 2011). Indeed, so strong is the association between alcohol consumption and high risk sexual behaviours such as inconsistent condom use that, in some cases, alcohol consumption prior to sexual intercourse is in itself considered a high risk behaviour (Nkansah-Amankra et al, 2011).

The theory most used to explain the association between alcohol consumption and risky sexual practices is known as the alcohol myopia theory. According to this theory, alcohol consumption limits an individual's processing capacity so that they only process simple proximal cues such as sexual arousal, and do not process distal complex cues such as the risk of sexually transmitted infections and HIV that would normally inhibit risky behaviour (Choudhry et al, 2014; Brown & Venable, 2007). This theory suggests that, despite knowledge of the risk of HIV transmission and the protective methods available, individuals would still tend to engage in risky sexual

behaviour after consumption of alcohol. Nkansah-Amankra et al (2011) say that alcohol drinking is associated with cognitive inhibition, poor behavioural judgement, and lowered risk perception, all leading to the possibility of engaging in high risk sexual behaviours. Imaledo, Peter-Kio and Asuquo (2012) support this in saying that alcohol use decreases inhibitions and affects safer sex negotiation skills. The consumption of alcohol affects an individual's ability to make rational judgements and consider the consequences of their actions (Muku, Yimer & Abera, 2014), which increases the likelihood of engaging in behaviours that put one at risk of contracting or transmitting HIV.

A study conducted by World Health Organisation (WHO, 2005) in eight countries across four continents, proposes another mechanism by which alcohol consumption affects sexual behaviour. The findings of this study showed that alcohol-serving venues sometimes serve as contact places for sexual encounters. Brown and Venable (2007) concur with this in saying that social venues where alcohol drinking takes place often provide opportunity for individuals to seek out new sexual partners. The same is echoed by Choudhry et al (2014), who say that the parties, bars and night clubs where alcohol is consumed provide meeting places for new sex partners. This may explain the association between alcohol consumption and having multiple sexual partners, as those that consume alcohol frequent places like bars and night clubs where they have opportunity to meet with new sex partners. It is worth noting however that the relationship between alcohol consumption and sexual behaviour is complex and influenced by many social and cultural factors (WHO, 2005). Still, determining whether alcohol consumption is a predictor of high risk sexual behaviours among university students at Midlands State University will pave the way for interventions that are targeted at those students who consume alcohol, and possibly interventions implemented at alcohol-serving venues. The current study focusses on the global association between alcohol use and risky sexual behaviours. This level of analysis examines whether overall frequency of alcohol consumption and heavy episodic drinking is related to overall involvement in high risk sexual behaviours (Cooper, 2002). As such, a causal relationship between alcohol use and high risk sexual behaviours cannot be inferred from this study.

2.5.2 Sexual debut and high risk sexual behaviours

A review of literature on the predictors of high risk sexual behaviours reveals sexual debut as one of them. Sexual debut refers to the age at which an individual had their first sexual

encounter, or began to be sexually active, excluding those experiences which may be classified as childhood sexual abuse. As found by Campbell (2009) among adolescents in Ghana, “Early age at first sexual encounter...increases the number of an individual’s lifetime sexual partners” (p. 26). Campbell (2009) also linked lower age at first sexual encounter to lower condom use and sex with high-risk partners. According to Jovic et al (2014), initiation of sexual intercourse before the age of 14 is linked to high risk sexual behaviours such as inconsistent condom use. Ratliff-Crain, Donald and Dalton (1999) reached the same conclusion, as they found that sexual debut was negatively correlated with the total number of sexual partners reported among college students at a liberal arts college in USA. That is to say, a lower age at first sexual encounter tended to be associated with a higher total number of sexual partners. The same study revealed that lower age at first sexual encounter was also linked to inconsistent condom use and engaging in casual sex, so much so that age at first sex was termed a ‘marker’ for risky sexual behaviours among college students (Ratliff-Crain, Donald & Dalton, 1999). Langer, Warheit and McDonald (2001) also report a significant negative correlation between sexual debut and risky sexual practices, although they limit these findings to the sample of university students in their study and make no claim of their generalizability. The researcher included sexual debut as one of the predictor variables in this study, in order to assess whether it is a significant predictor of high risk sexual behaviours among undergraduate university students at a Zimbabwean university.

2.5.3 Childhood sexual abuse and high risk sexual behaviours

Child sexual abuse is defined by the Saskatchewan Prevention Institute (2012, p. 5) as, “...when another child, youth or adult engages in sexual activity (with or without penetration) with a child.” The trauma of these childhood experiences of sexual abuse tends in most cases to have effects that carry even to adulthood, influencing the thought patterns and behaviour of those who have lived through such experiences. Sexual behaviour is no exception to this, and childhood sexual abuse may pose a risk in adulthood through behaviours that put the survivor at risk of HIV transmission (Saskatchewan Prevention Institute, 2012). Some studies have shown a link between childhood sexual abuse and sexual behaviour in adulthood. For example, childhood sexual abuse experiences were associated with high risk sexual behaviour in adulthood, specifically unprotected sex and more lifetime sexual partners, among women who visited an STI clinic in USA (Senn, Carey & Conry-Doniger, 2011). Tiruneh (2004) cites a history of

coercive sex or rape as an indicator of high risk sexual behaviours like multi-partner contact and inconsistent or non-use of condoms among young people in Addis Ababa. Othieno et al (2015) also report that sexual abuse as a child is linked with having multiple sexual partners among university students in Nairobi, Kenya. Lastly, Nkansah-Amankra et al (2011) say that experiencing physically forced sex in childhood increases the chances of early sexual debut eightfold. This would open up survivors of childhood sexual abuse to the vulnerability to high risk sexual behaviour that is associated with early sexual debut as discussed in the previous section. The Saskatchewan Prevention Institute (2012) explains the link between childhood sexual abuse and high risk sexual behaviours, as being due to self-blame and low self-esteem in survivors of childhood sexual abuse, which leads to a feeling of a low level of control in relationships and sexual acts. This might cause survivors of childhood sexual abuse to take a passive role in health behaviours. This means that survivors of childhood sexual abuse would feel less able to negotiate safer sex practices in their relationships, which may increase the likelihood of inconsistent condom use. Where childhood sexual abuse is a predictor of high risk sexual behaviours, screening and intervention efforts for childhood sexual abuse may serve to reduce the prevalence of high risk sexual behaviours, and therefore reduce the heterosexual transmission of HIV.

2.6 THEORETICAL FRAMEWORK

It is useful to consider theories in the execution of research, as they help to explain the factors that may lead to individual and group behaviours (Mantell, DiVittis & Auerbach, 1997). This research was guided by the multi-system perspective of sexual risk behaviour, and the problem behaviour theory.

2.6.1 Multi-system perspective

The multi-system perspective of sexual risk behaviour is a framework based on Bronfenbrenner's (1989) Ecological Systems theory. The Ecological Systems theory proposes that there is reciprocal interaction between an individual's bio-psychological makeup and their surrounding environment of different systems, from the micro level to the macro level (Bronfenbrenner, 1993). The multi-system perspective of sexual risk behaviour stems from this theory, and posits that individuals' sexual behaviour is influenced by multiple systems which interact with each other, particularly the self system, familial system, and extrafamilial system

(Kotchick, Shaffer, Forehand & Miller, 2001). The family system involves such factors as parental monitoring, while the extrafamilial system includes those aspects in an individual's environment such as peer norms and values (Kalina, 2012). While factors in all three systems – self, familial and extrafamilial – influence sexual behaviour, the scope of this study was such that only factors in the self system were included as predictors of high risk sexual behaviours among university students. Kotchick et al (2001) divide the self system into biological, psychological and behavioural influences on sexual risk behaviour. Among the psychological factors that influence sexual risk behaviour, they mention a history of victimisation and the psychological distress associated with it, particularly a history of sexual abuse. This was one of the predictor variables that were included in this study. The self system also includes behavioural factors, among them alcohol use and early sexual debut (Kotchick et al, 2001). According to Kalina (2012) these behaviours are significant in influencing the sexual risk behaviour of young adults. In line with this, the present study included alcohol use and sexual debut as predictor variables for high risk sexual behaviours.

2.6.2 Problem behaviour theory

The second theory that guided this study was the problem behaviour theory. This theory was put forth by Jessor and Jessor in 1977, in an attempt to explain deviant behaviours in adolescents and young adults. According to this theory, problem behaviours are related (Milkman & Wanberg, 2012). As said by Tiruneh, (2004, p. 12), "...high-risk sexual behaviour co-occurs with other deviant behaviours such as substance use and delinquency." Kalina (2012) supports this by saying that there is an association between different problem behaviours. This co-occurrence of problem behaviours is sometimes referred to as a 'syndrome' of problem behaviours. The theory proposes that tendency towards one problem behaviour will often entail involvement in other problem behaviours in young adults, and it mentions such problem behaviours as illicit drug use, alcohol abuse, delinquency, and risky sexual behaviour (Zamboanga, Carlo & Raffaelli, 2004). Other behavioural factors, like alcohol use and early onset of sexual activity, are strongly linked to high risk sexual behaviours. It was expected then, according to this theory, that alcohol use and sexual debut would be predictors of high risk sexual behaviours in university students.

2.7 KNOWLEDGE GAP

This study was carried out at Midlands State University in Gweru, Zimbabwe, to ascertain the prevalence of sexual behaviours that place university students at risk of HIV transmission, as well as look into the factors that predict these risky sexual behaviours. A review of the literature reflects that studies such as this have been done in many countries worldwide, including USA, Portugal, Sweden and Australia. The prevalence and predictors of high risk sexual behaviours among university students have also been studied in African nations like Nigeria, Ethiopia, Kenya, Madagascar and South Africa. The results obtained in other countries internationally and regionally may not be applicable to the Zimbabwean context, due to differences in economy, culture, and the education system itself. Despite this, there has been very little research done focussing specifically on the sexual behaviour of university students in Zimbabwe. The few studies carried out in Zimbabwe by Katsinde, Chidyamatamba and Katsinde (2011), Nkomazana and Maharaj (2014), and Shumba, Mapfumo and Chademana (2011), focussed exclusively on the prevalence of multiple sexual partnerships and inconsistent condom use among samples of university students. Only one of these studies reflected a predictive relationship between relationship status and consistency of condom use. The rest did not include any inquiry into the factors that predict these high risk sexual behaviours among university students. It is because of this gap that the researcher finds this study necessary, as it will widen the scope of the high risk sexual behaviours investigated to include intergenerational sex and transactional sex, and also determine the factors that predict high risk sexual behaviours among university students at a Zimbabwean university.

2.8 CHAPTER SUMMARY

The aim of this chapter was to give a review of literature related to this research. First, it explored the uniqueness of the university setting and the characteristics of this setting that make university students a population sub-group of interest in matters of sexual and reproductive health. Following this, high risk sexual behaviours were discussed, with particular attention paid to those high risk sexual behaviours included in this study, that is, inconsistent condom use, multiple sexual partnerships, intergenerational sex, and transactional sex. The next section looked at the prevalence of high risk sexual behaviours among university students in other universities in various countries in Africa and beyond. The predictors of high risk sexual behaviours were then discussed, and focus was given to alcohol use, childhood sexual abuse, and

sexual debut as the predictors included in this study. Following this, the two theories that guided this research were given, namely the multi-systems perspective and the problem behaviour theory. Finally, the knowledge gap that provided the motivation for this research was clearly identified. The following chapter will detail the methodology that was used in conducting this study.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

In Chapter two, the researcher expanded on the concepts in this study by reviewing relevant literature. The variables of high risk sexual behaviours, and the predictors of such behaviours, were considered in depth. This chapter describes the methodology used in conducting the study. This includes the research paradigm, research design, target population and sampling procedures. The chapter will also detail the instruments used in the study, and the data collection as well as data analysis procedures.

3.2 RESEARCH PARADIGM

The researcher was guided by the post-positivist paradigm in this study. Post-positivism is a “modified scientific method for the social sciences” (Shirish, 2013 p. 12) which developed from the positivist approach. Positivism is an objective stance that holds that the researcher’s beliefs are independent from the subject of the study (Fox, Gouthro, Morakabati & Brackstone, 2014). Post-positivism, on the other hand, holds that there is an objective reality, but acknowledges that this objective reality can only be imperfectly comprehended because of the influence of the researcher’s culture, values and beliefs on their perception of the world (Treagust, Won & Duit, 2014). Some level of influence from the researcher in the process of research is inevitable. Despite this, the researcher tries their best to be as objective as possible, putting aside personal biases (Fox et al, 2014). According to Shirish (2013), post-positivism aims to produce knowledge about the relationships between pre-determined variables, which can be generalised to the population of interest. It often involves survey designs to find correlational explanations, and the data collected tends to be quantitative (Fox, et al, 2014). In attempting to find a predictive relationship between certain independent variables and the dependent variables of high risk sexual behaviours, this study was quantitative in approach and took on a survey design, as is discussed below.

3.3 RESEARCH DESIGN

According to Kerlinger (1986, in Kumar, 2011), research design is the plan or structure adopted to obtain answers to research questions. This study was aimed at establishing factors which are related to high risk sexual behaviours among university students, and so an analytical survey design was adopted. Analytical surveys explore the association between dependent and independent variables (Gray, 2014). Oppenheim (2005 in Gray, 2013) emphasises that the analytical survey design is inclined towards a quasi-experimental design, because of its orientation towards prediction. However in analytical surveys, variables are controlled not by use of physical controls as with experimental research, but by the use of statistical techniques such as multiple regression during data analysis (Ahlgren & Walberg, 1979 in Gill & Johnson, 2010). Through focussed data analysis, this type of research looks at the effects of a set of variables on another set of variables (Kelley, Clark, Brown & Sitzia, 2003). In the case of this study, the predictive value of general alcohol use, heavy episodic drinking, childhood sexual abuse and age at first sexual encounter in relation to various high risk sexual behaviours was examined.

The variables of focus in the analytical survey research design are distinguished as either dependent or independent. Gray (2014) explains that the dependent variable is the subject of the research, while the independent variables are those variables that are observed for their effects on the dependent variable. In light of this, the dependent variables in this research were high risk sexual behaviours, specifically inconsistent condom use, multiple sexual partners, transactional sex, and intergenerational sex. The independent variables that were examined for relationship with the dependent variables were general alcohol use, heavy episodic drinking, childhood sexual abuse, and age at first sexual encounter. The quantitative nature of the study also allowed for the determination of the prevalence of the high risk sexual behaviours mentioned above, among undergraduate university students at Midlands State University.

3.4 POPULATION

A population is defined by Goddard and Melville (2001) as the group that is the subject of interest in the research. Midlands State University has an enrolment of approximately 16 200 (Midlands State University, 2013). However, the population in this research consisted only of full-time undergraduate students enrolled at Midlands State University during the August to November 2015 period in which this research was conducted. The study was also limited to

those students whose departments were based at the main campus of the university. Midlands State University has a number of campuses in different geographical locations. For practicality purposes, the researcher focussed on students in the five faculties based at the main campus of the university in Senga, Gweru. The study also excluded those students who were placed in different workplaces all over the country as part of their work-related learning, usually done in the third year of undergraduate degrees. This was done for practical reasons, as these students would have been difficult to reach.

3.5 SAMPLE SIZE

From the population, the researcher selected a subgroup of individuals to become the sample, from which inferences could be made about the population (Kumar, 2011). Gill and Johnson (2010) provide a table with recommended sample sizes for varied populations, and the researcher used this table to determine the sample size for this research. For a population of above 10 000, a final sample size of 370 participants was recommended, based on 95% confidence level. However, Gill and Johnson (2010) point out that this number should be increased, to compensate for potential non-response. Some of the participants may decide not to fill in the questionnaire, or provide incomplete responses. To counter the effects of this on the sample size, the initial selected number of participants needs to be above the required sample number. The researcher therefore administered the research instrument to 417 students. However, 21 of these students did not return the questionnaire, and 15 gave incomplete responses. This resulted in a final sample of 381.

3.6 SAMPLING METHOD

Sampling refers to the process of selecting a sub-group from the population of interest to become the basis for inferences about population characteristics (Kumar, 2011). In this study, the researcher used the probability sampling method of clustered random sampling. Gorard (2001) suggests probability sampling methods for quantitative research, as they increase the generalizability of the results obtained from the sample to the population from which the sample was drawn. According to Kothari (2004), clustered random sampling takes place in stages. Initially the sample is divided into large units, and a number of these units are selected at random (Clark-Carter, 2004). The selected units may then be divided into smaller units, and a random sample of these smaller units selected. This process may be repeated to give a number of stages

in the sampling process. When clustered random sampling involves more than one stage, it may be referred to as multi-stage clustered random sampling (Clark-Carter, 2004). Finally, all the population elements within the selected clusters or units are included in the sample.

The researcher randomly selected three faculties from the five faculties based at the Midlands State University main campus. In the second stage, one department was selected randomly from each of these three faculties. The third stage involved the selection of two classes at random from each of the three selected departments. The researcher then administered the questionnaire to all the willing students in the six selected classes.

The researcher acknowledges that while random sampling would have been ideal to ensure representativeness, it would have proven costly in terms of time and resources as the researcher would have had to compile a complete list of all fulltime undergraduate students at Midlands State University main campus and look for each selected participant individually. Multi-stage clustered sampling was more convenient and less costly, as questionnaires could be administered to the selected classes when they convened for lectures. As pointed out by Panneerselvam (2004), multi-stage sampling helps lower cost and time requirements by reducing the size of the sampling frame. Clark-Carter (2004) supports this by saying that in clustered sampling, the sample is grouped in a limited number of locations, allowing ease of access. Gorard (2001), however, cites cluster homogeneity as a weakness of clustered sampling, explaining that clustered sampling may introduce bias since the cases in each cluster may tend to be similar. He recommends that the researcher sample more clusters, and fewer people in each cluster, to increase representativeness. Despite its disadvantages, Singh and Nath (2007) offer support for multistage sampling by saying that observations from multistage samples may be used in drawing inferences about population characteristics.

3.7 RESEARCH INSTRUMENTS

In this research, data was collected using a questionnaire. According to Pattern (2002), a questionnaire is a research tool for gathering information from participants which is made up of a series of questions to which the participants provide responses. The questionnaire used in this study was a self-administered written questionnaire. As explained by Singh (2007), where self-administered questionnaires are used respondents fill out the questionnaire themselves. The questionnaire items limited respondents to a range of predetermined responses, as is usually the

case with questionnaires used for quantitative research (Sale, Lohfield & Brazil, 2002). The researcher selected the questionnaire as the research instrument because of its convenience and low cost. As explained by Kumar (2011), when collecting data from a large number of respondents, the use of questionnaires saves time and requires less financial resources.

The researcher adapted the Chicago State University HIV Risk Behaviour Questionnaire for University Students (Balogun & Abiona, 2010). This instrument showed high test-retest reliability when it was administered to university students in USA, Turkey and South Africa (Balogun & Abiona, 2010). According to the authors, the reliability coefficient ranged between 0.958 and 1.000 for demographic information questions, 0.945 and 0.977 for questions on the alcohol use subscale, and 0.875 and 0.996 for questions on high risk sexual behaviour (Balogun & Abiona, 2010). This shows that the instrument is very reliable, even when applied in the African context. In addition to high reliability, Balogun and Abiona (2010) consulted with subject matter experts in reviewing the questionnaire in order to determine a high content validity.

The first four questions in the questionnaire collected information on participants' demographic information, specifically their age, sex, marital status and year of study. The following questions collected information on participants' sexual behaviour, including the age at which they had their first sexual encounter, the number of lifetime sexual partners, the number of sexual partners in the 12 months preceding the study, the consistency of condom use, and condom use at last sexual encounter. A question on alcohol use in the 12 months preceding the study was adapted from Choudhry et al (2014) and included in the questionnaire. The following questions collected information on heavy episodic drinking, history of childhood sexual abuse, transactional sex, and intergenerational sex. The questionnaire had a total of sixteen questions.

Before the study was carried out, the data collection instrument was pilot tested on 10 students who were not part of the selected sample, in order to identify errors and gaps in the questionnaire. These students then gave feedback on the readability of the questionnaire and the clarity of the questions. The instrument testing process also helped the researcher ascertain the face validity of the questionnaire, that is, the extent to which the instrument appears to measure what it purports to the measure in the eyes of the participants.

3.8 DATA COLLECTION PROCEDURE

Data collection procedure refers to the steps that were taken in administering the research instrument in order to collect data from participants. The researcher personally administered the questionnaires to the participants. The process was carried out in lecture theatres at the Midlands State University main campus. The researcher approached lecturers who had lectures scheduled with the selected classes, and requested either the first or last 20 minutes of their lectures to administer questionnaires.

The researcher began each questionnaire administration session by introducing herself and explaining the purposes and aims of the study to the participants. She also assured the participants that the information they provided would be kept confidential and used only as aggregated data for the purposes of this research. Students were also informed that those not willing to participate in the study could withdraw at any point with no penalty to themselves. Following this, the researcher administered the questionnaire to the willing participants, with the help of an assistant. The researcher stayed present throughout the process to encourage a high return rate of questionnaires, and also to avail herself to answer any questions that the respondents had. Students were dissuaded from discussing with other students as they filled in the questionnaire. This was done to encourage them to give truthful answers to questions about the personal and sensitive topic of sexual behaviour. The researcher and her assistant then collected the questionnaires as students completed them.

3.9 DATA ANALYSIS

Once the data was collected, descriptive statistics were used to summarise the data and portray the prevalence of the different high risk sexual behaviours among fulltime undergraduate university students at Midlands State University. Logistic regression analyses were also conducted to establish relationships between the various explanatory variables and high risk sexual behaviours. According to Muijs (2011), regression analysis brings out the relationship between a dependent or outcome variable, and one or more predictor or independent variables. Privitera (2014) also cites regression analysis as useful in determining if values for one factor predict values for a second factor. In this case, the dependent variables were the high risk sexual behaviours of inconsistent condom use, multiple sexual partnerships, transactional sex, and intergenerational sex. The predictor variables that were included were childhood sexual abuse,

sexual debut, heavy episodic drinking, as well as general alcohol use. Because the dependent variables were categorical in nature, the researcher used logistic regression. Data were analysed using IBM SPSS Statistics for Windows, version 23.0.

3.10 ETHICAL CONSIDERATIONS

Before commencing the research, the researcher sought approval from the Midlands State University Registrar's office. A copy of the stamped approval letter from the Registrar's office is included in the appendices. The researcher also obtained spoken informed consent from the participants before administration of the research instrument. Before the questionnaire was administered, all participants were informed of the nature and purpose of the study, as well as the right to withdraw their participation from the study at any point without penalty. In addition, the questionnaires were completed anonymously, and no personal identification information was required from the participants. The researcher emphasised the maintenance of privacy and confidentiality of the information supplied by participants.

3.11 CHAPTER SUMMARY

This chapter detailed the methodology employed in this research. The post-positivist paradigm which guided this study and the analytical survey design used were discussed, and their use justified in light of the aims and objectives of this research. The population was also specified, and the way in which the final sample of 381 participants was reached was outlined. The researcher went on to describe the questionnaire used in the survey, as well as the way in which it was administered. Data analysis procedures were discussed, and the chapter also included a section on the ethical considerations that were made by the researcher. The following chapter will give a presentation, analysis and interpretation of the data that was collected.

CHAPTER 4

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

Chapter 3 detailed the methodology used in this study, including the research paradigm and design as well as all data collection instruments and procedures. This fourth chapter presents the data that was collected, together with the analysis and interpretation of this data. Data will be presented in tables and graphs throughout the chapter.

4.2 DEMOGRAPHIC PROFILE OF THE SAMPLE

The first four questions of the research questionnaire collected demographic information about the participants. The final sample comprised 381 undergraduate students (N=381). Their ages ranged between 18 and 30, with the mean age being 21.23 ($SD = 1.917$).

Table 1: Demographic characteristics of the sample (N=381)

Categories	Frequency (n)	Percent (%)
Sex		
Female	250	65.6
Male	131	34.4
Year of study		
First year	105	27.6
Second year	191	50.1
Fourth year	85	22.3
Marital status		
Never been married	373	97.9
Married	3	.8
Separated	3	.8
Divorced	1	.3
Widowed	1	.3

As shown in Table 1 above, 65.5% (n=250) of the participants were female, and 34.4% (n=131) were male. Most of the students in the sample (50.1%, n=191) were in their second year of study, while 27.6% (n=105) and 22.3% (n=85) were in their first and fourth year of study respectively. The vast majority of the respondents (97.9%, n=373) had never been married. 0.8% (n=3) of the

participants were married, 0.8% (n=3) were separated, 0.3% (n=1) were divorced, and 0.3% (n=1) were widowed.

4.3 INITIATION OF SEXUAL ACTIVITY

Question 5 of the research instrument requested information on sexual debut, which is the age at which participants had sexual intercourse for the first time.

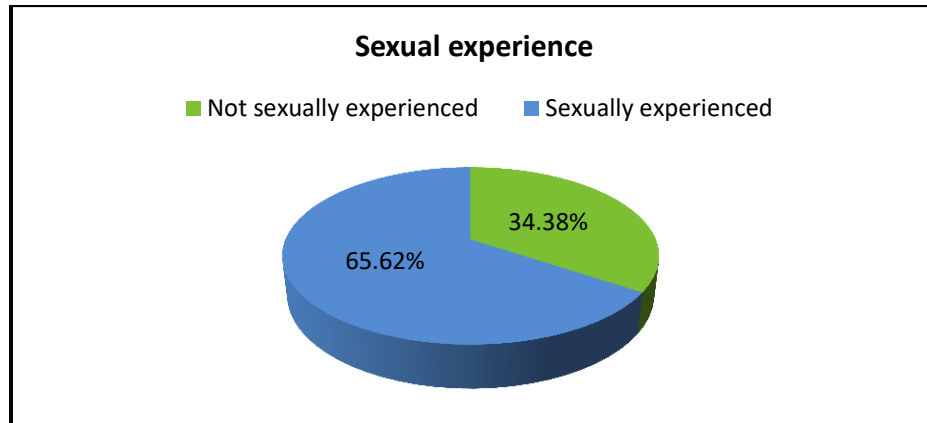


Figure 1: Sexual experience

As shown in Figure 1, most of the students in the sample (65.62%, n=250) were sexually experienced. The remaining 34.38% (n=131) reported that they had never had sexual intercourse before. All students who reported that they had never had sexual intercourse were excluded from subsequent data analysis, as the study sought to determine the prevalence of and factors predicting high risk sexual behavior among students who were sexually experienced.

Students who were sexually experienced provided information on their sexual debut. The responses were presented as age categories, and the results obtained are shown in Figure 2 below.

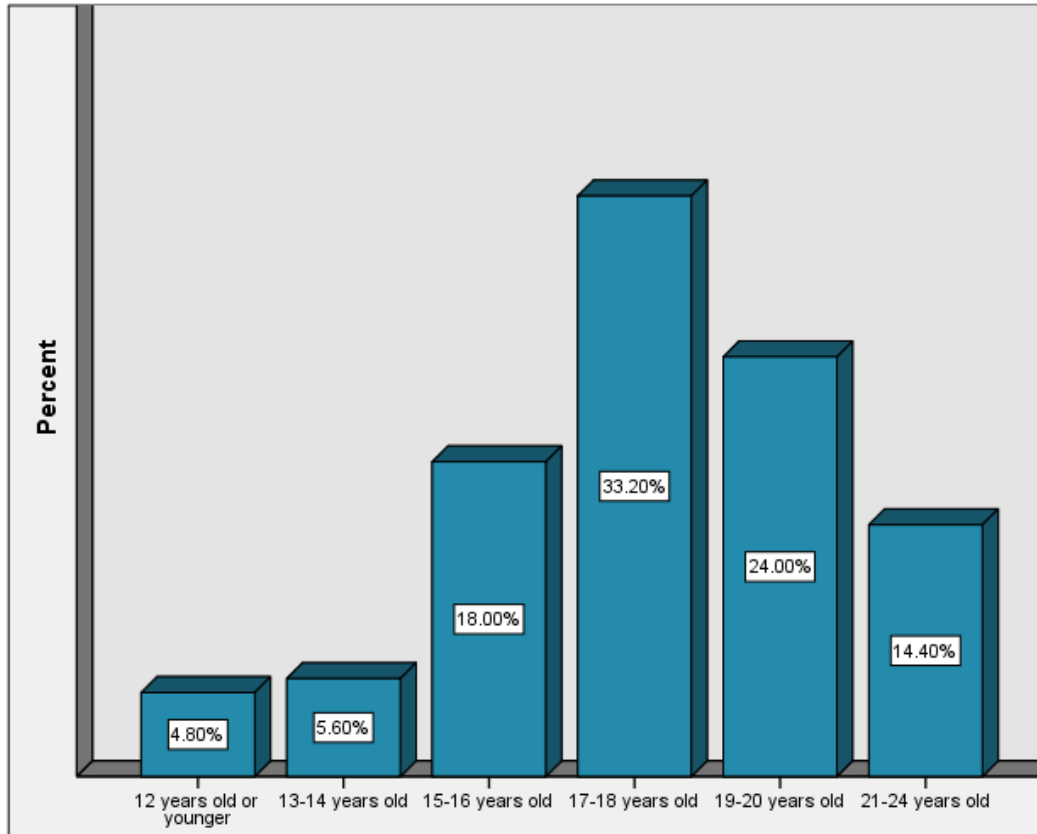


Figure 2: Sexual debut

As shown in Figure 2, only 4.8% (n=12) and 5.6% (n=14) students in the sample had their sexual debut at the ages of 12 years old or younger and 13-14 years old respectively. 18% (n=45) reported a sexual debut of 15-16 years. Most of the students who were sexually experienced (33.2%, n=83) had their sexual debut at 17-18 years of age. 24.0% (n=60) had a sexual debut of 19-20 years, and 14.4% (n=36) had a sexual debut of 21-24 years. None of the students reported a sexual debut of 25 years or older, and so this category was excluded from Figure 2 above. A calculation of cumulative percentages reflects that 61.6% of sexually experienced students had a sexual debut of below 19 years of age.

4.4 NUMBER OF SEXUAL PARTNERS

The variable of multiple sexual partnerships was addressed by two questions in the questionnaire, one focusing on the number of lifetime sexual partners and the other focusing on the number of sexual partners in the last 12 months. Results for these two measures are shown below.

Table 2: Number of sexual partners among the sexually experienced (N=250)

Category	Frequency (n)	Percent (%)
Lifetime sexual partners		
1 person	57	22.8
2 people	45	18.0
3 people	30	12.0
4 people	26	10.4
5 people	26	10.4
6 or more people	66	26.4
Sexual partners in the 12 months prior the study		
No sexual intercourse in the 12 months prior to the study	18	7.2
1 person	126	50.4
2-3 people	61	24.4
4-5 people	22	8.8
6 or more people	23	9.2

Of the 250 sexually experienced students in the sample, 22.8% (n=57) reported that they had had 1 sexual partner in their lifetime, 18.0% (n=45) had had two sexual partners, 12.0% (n=30) had had three sexual partners, 10.4% (n=26) had had four sexual partners, and 10.4% (26) had had five sexual partners. The category with the greatest percentage was 6 or more sexual partners, selected by 26.4% (n=66) of the respondents.

In response to the question on the number of sexual partners in the 12 months prior to the study, 7.2% (n=18) of the respondents reported that they had not had sexual intercourse in the 12 months prior to the study. Just over half the respondents (50.4%, n=126) had had one sexual partner in the past year, and almost a quarter (24.4%, n=61) had had 2 or 3 sexual partners in the last year. Only 8.8% (n=22) and 9.2% (n=23) reported 4 to 5 and 6 or more sexual partners in the last year, respectively.

The variables of lifetime sexual partners and sexual partners in the last 12 months were dichotomized, with individuals either being categorized as not having multiple sexual partners, or having multiple sexual partners. Using the results summarized above, individuals were

categorized as having multiple sexual partners in each case if they reported having had more than one sexual partner. The outcomes of this classification are presented in Figures 3 and 4 below.

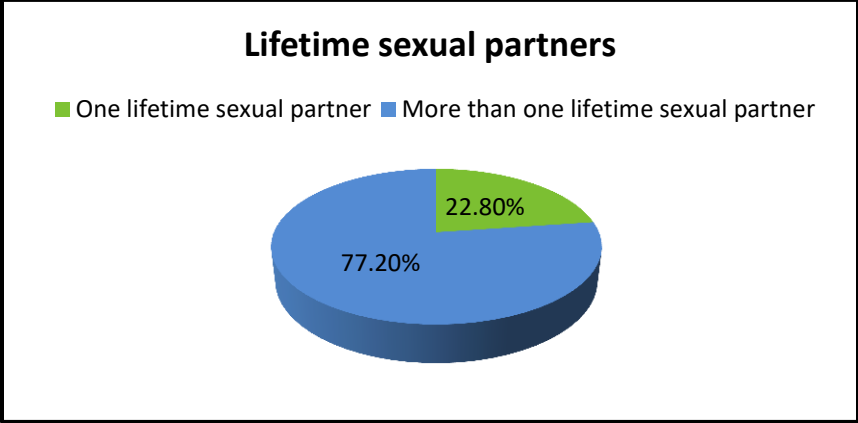


Figure 3: Lifetime sexual partners

As reflected in Figure 3 above, more than three quarters (77.2%, n=193) of the sexually experienced students had had more than one sexual partner in their lifetime. Only 22.8% (n=57) did not report multiple lifetime sexual partnerships.

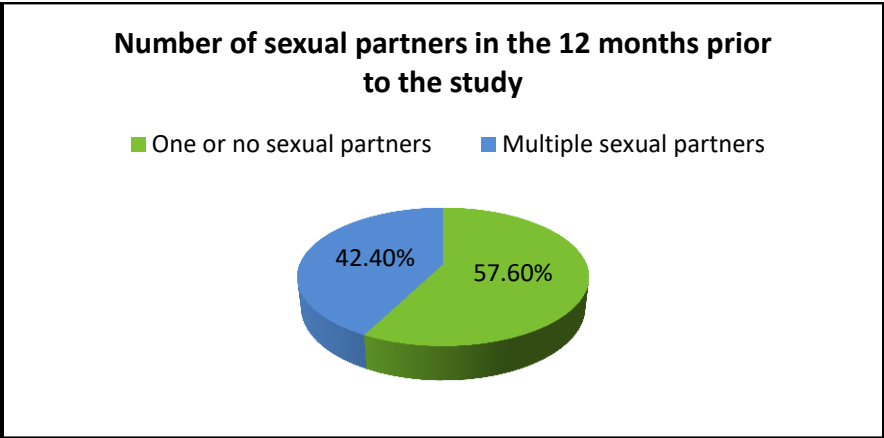


Figure 4: Sexual partners in the 12 months prior to the study

Figure 4 above shows that the majority of sexually experienced students (57.6%, n=144) had either not had sex in the 12 months prior to the study, or had had one sexual partner in that time. Less than half (42.4%, n=106) of the students reported having had more than one sexual partner in the 12 months before the study.

4.5 CONSISTENCY OF CONDOM USE

The respondents in this study answered two questions aimed at assessing consistency of condom use. The first question was on consistency of condom use in the last 12 months. After excluding all students who had no sexual experience, the available responses were “I have not had sexual intercourse during the past 12 months”, “Never used a condom”, “Rarely used a condom”, “Sometimes used a condom”, “Most of the time we used a condom”, and “Always used a condom”. For all participants who had had sex in the 12 months prior to the study, only the last response, “Always used a condom”, was scored ‘0’ to reflect consistent condom use. Any other response was scored ‘1’ and was labeled ‘Inconsistent condom use’, encompassing inconsistent and non-use of condoms during sexual intercourse in the past year. For those participants who were sexually experienced but had not had sex in the 12 months prior to the study, consistency of condom use was assessed by the question, “The last time you had sexual intercourse, did you or your partner use a condom?” Those who answered ‘Yes’ were placed in the category of consistent condom use, while those who answered ‘No’ were classified as reporting inconsistent condom use. The results are presented in Figure 5 below.

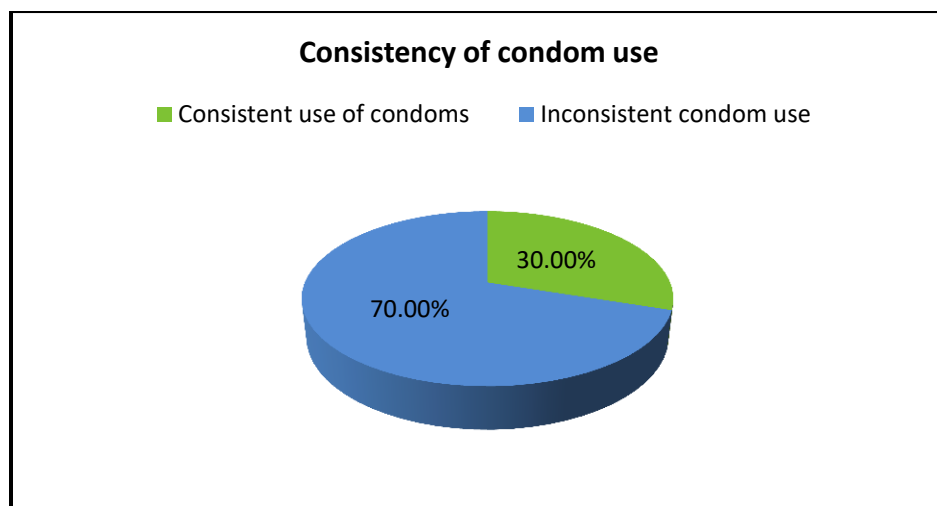


Figure 5: Consistency of condom use

Figure 5 shows that the vast majority (70.0%, n=175) of sexually experienced students did not use condoms consistently. Only 30.0% (n=75) reported consistent condom use.

4.6 ALCOHOL USE

The study participants were required to answer two questions on alcohol use. The first question assessed alcohol consumption in the 12 months prior to the study, on an ordinal scale ranging from 'Never' to 'Four times a week or more'. The second question assessed frequency of heavy episodic drinking in the 30 days before the study, also measured on an ordinal scale ranging from '0 days' to '20 or more days'. The results obtained are presented in Figures 6 and 7 below.

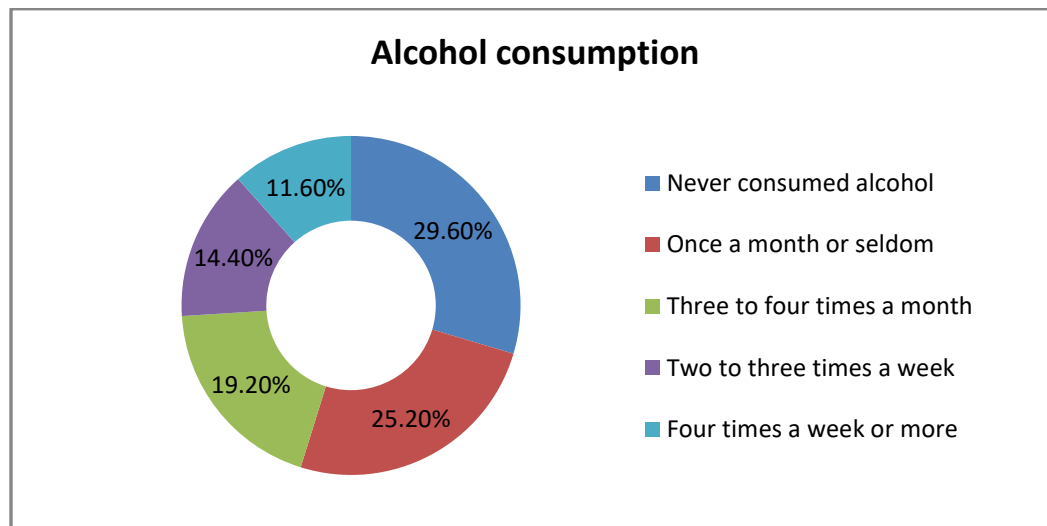


Figure 6: Alcohol consumption

Figure 6 shows the results obtained for alcohol consumption in the 12 months prior to the study among the sexually experienced students. The greatest percentage of students (29.6%, n=74) reported that they never consumed alcohol. 25.2% (n=63) said that they consumed alcohol once a month or seldom, 19.2% (n=48) selected three to four times a month, 14.4% (n=36) selected two to three times a week, and 11.6% (n=29) selected four times a week or more. Figure 7 reflects the results of the questionnaire item assessing heavy episodic alcohol consumption.

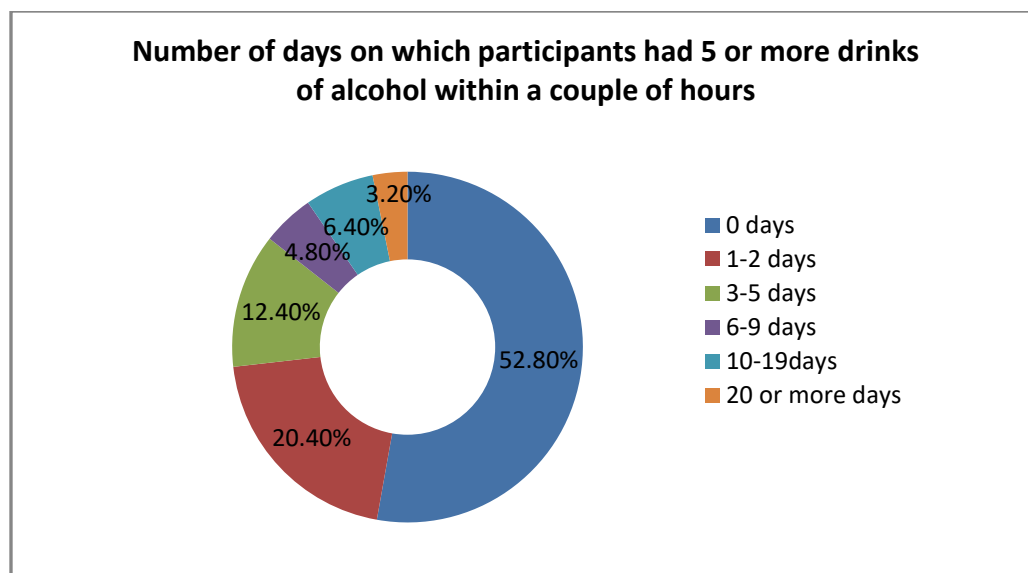


Figure 7: Heavy episodic alcohol consumption

As shown in Figure 7, the majority of participants (52.8%, n=132) had not engaged in heavy episodic alcohol consumption in the month prior to the study. 20.4% (n=51) reported heavy episodic drinking on 1-2 days, 12.4% (n=31) on 3-5 days, and 4.8% (n=12) on 6-9 days. Only 6.4% (n=16) and 3.2% (n=8) of the respondents had engaged in heavy episodic drinking on 10-19 days and 20 or more days in the last month, respectively.

4.7 CHILDHOOD SEXUAL ABUSE

Questions 12, 13 and 14 of the questionnaire assessed the predictor variable of self-reported childhood sexual abuse. Participants answered 'Yes' or 'No' to each of the questions, with 'yes' reflecting the presence of some aspect of childhood sexual abuse, and 'no' indicating the absence of that aspect. All 'yes' responses were coded as '1', and all 'no' responses were coded as '0'. To find the overall presence or absence of self-reported childhood sexual abuse, the values of the three responses for each participant were totaled. Totals of '0' were classified as 'No childhood sexual abuse', and any total higher than 0 was classified as indicating the presence of childhood sexual abuse. Results for self-reported childhood sexual abuse are presented in Figure 8 below.

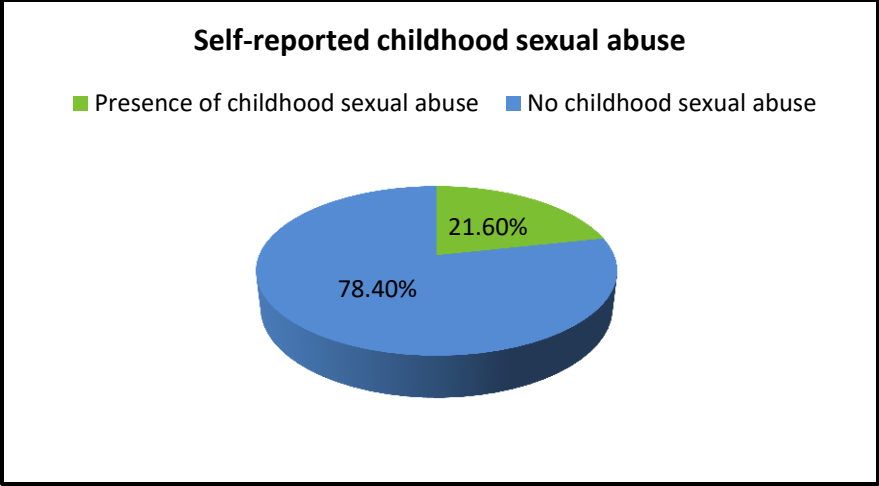


Figure 8: Childhood sexual abuse

Figure 8 summarises the results obtained for the variable ‘Childhood sexual abuse’. Most of the respondents (78.4%, n=196) reported no history of childhood sexual abuse, while 21.6% (n=54) of the participants reported that they had experienced some form of childhood sexual abuse.

4.8 TRANSACTIONAL SEX

Question 15 asked participants if they had ever paid someone to have sex with them. All ‘yes’ responses were taken to indicate that the participant had engaged in transactional sex, while ‘no’ responses reflected that the individual had not engaged in transactional sex. Results for this question are presented in Figure 9 below.

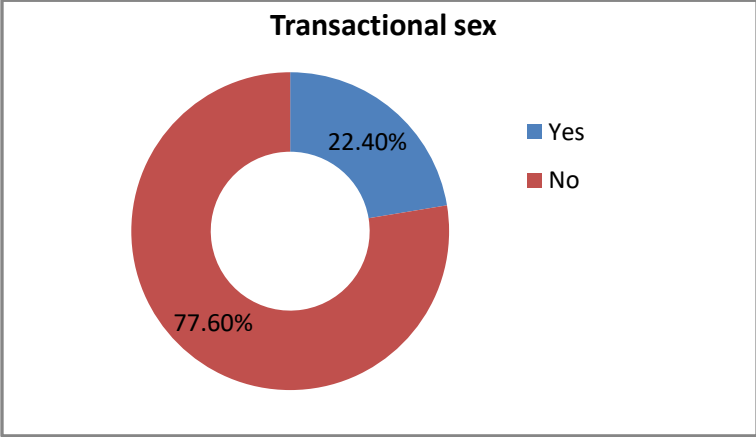


Figure 9: Transactional sex

As shown in Figure 9, the majority of respondents (77.6%, n=194) had never paid anyone to have sex with them. Only 22.4% (n=56) reported that they had paid someone to have sex with them. This shows that less than a quarter of the sexually experienced students engaged in transactional sex.

4.9 INTERGENERATIONAL SEX

The variable ‘intergenerational sex’ was assessed by the question on whether participants had ever had sex with an individual 10 or more years older than them. ‘Yes’ responses reflected intergenerational sex, while ‘no’ responses did not. Results for this question are presented in Figure 10.

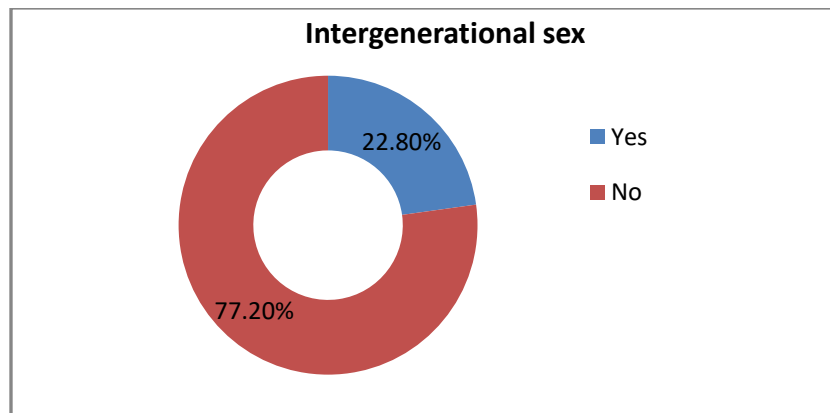


Figure 10: Intergenerational sex

Over three quarters of the respondents (77.2%, n=193) had never engaged in intergenerational sex. Only 22.8% (n=57) of the respondents answered affirmatively to the question on intergenerational sex.

4.10 LOGISTIC REGRESSION ANALYSES

Binomial logistic regression analyses were carried out on the dependent variables of multiple sexual partners, inconsistent condom use, transactional sex, and intergenerational sex. In each case, the predictor variables alcohol consumption, heavy episodic drinking of alcohol, sexual

debut, and childhood sexual abuse were entered in a single step. The results of these analyses are displayed in the tables below.

4.10.1 Logistic regression analysis results for inconsistent condom use

Binomial logistic regression analysis was carried out to identify factors that predict the likelihood of inconsistent condom use. The prediction model including the four independent variables shown in Table 3 below was statistically significant ($p=0.000$) in predicting inconsistent condom use. The model correctly classified 71.2% of the cases, and explained 14.8% (Nagelkerke R^2) of the variance in consistency of condom use.

Table 3: Logistic regression analysis predicting the likelihood of inconsistent condom use

Predictor variable	B	S.E.	Wald	df	Sig. (p)	Odds Ratio	95% C.I. for Odds Ratio	
							Lower	Upper
Sexual debut	-.310	.139	4.950	1	.026	.734	.558	.964
Alcohol consumption	-.084	.182	.214	1	.644	.919	.643	1.314
Heavy episodic drinking	.488	.223	4.806	1	.028	1.630	1.053	2.522
Childhood sexual abuse	.588	.417	1.985	1	.159	1.800	.795	4.077

Of the four variables entered in the prediction model for consistency of condom use, two variables were statistically significant. There was strong statistical evidence at 5% level of significance that sexual debut (OR=0.734, $p=0.026$) affects the probability of inconsistent condom use, with a lower age at sexual debut being associated with inconsistent condom use during sexual encounters. There was also strong statistical evidence that heavy episodic drinking (OR=1.630, $p=0.028$) affects the probability of inconsistent condom use. In this case, with each increase in the frequency level of episodic drinking selected, the individual became 1.6 times more likely to engage in unprotected sex. There was no statistical evidence at 5% level of significance that either alcohol consumption ($p=0.644$) or childhood sexual abuse ($p=0.159$) had an effect on the probability of engaging in unprotected sex.

4.10.2 Logistic regression analysis results for lifetime multiple sexual partnerships

The four variables of sexual debut, alcohol consumption, heavy episodic drinking and childhood sexual abuse were entered in a single step to predict the likelihood of reporting multiple lifetime sexual partnerships. The model was statistically significant ($p=0.000$) in predicting lifetime multiple sexual partnerships, and explained 33.4% (Nagelkerke R^2) of the variance in multiple lifetime sexual partnerships. 78.4% of the cases were correctly classified using this model.

Table 4: Logistic regression analysis predicting the likelihood of multiple sexual partnerships

Predictor variable	B	S.E.	Wald	df	Sig. (p)	Odds Ratio	95% C.I. for Odds Ratio	
							Lower	Upper
Sexual debut	-.779	.183	18.223	1	.000	.459	.321	.656
Alcohol consumption	.658	.273	5.813	1	.016	1.931	1.131	3.298
Heavy episodic drinking	-.022	.322	.005	1	.945	.978	.520	1.839
Childhood sexual abuse	.578	.524	1.214	1	.271	1.782	.638	4.982

As shown in Table 4 above, only two of the independent variables were significant in predicting the likelihood of multiple lifetime sexual partnerships. There was very strong statistical evidence that sexual debut (OR=0.459, $p=0.000$) had an effect on multiple lifetime sexual partnerships, with a lower age at sexual debut increasing the likelihood of having multiple lifetime sexual partnerships. There was also a statistically significant association between alcohol consumption (OR=1.931, $p=0.016$) and multiple lifetime sexual partnerships. Each one unit increase in the level of alcohol consumption selected doubled the likelihood that an individual would have multiple sexual partners in their lifetime. There was, however, no statistical evidence at 5% level of significance to show any association between likelihood of having multiple lifetime sexual partners and either heavy episodic drinking or childhood sexual abuse.

4.10.3 Logistic regression analysis results for multiple sexual partnerships in the last year

Binomial logistic regression analysis was carried out to determine whether any of predictor variables were significant in predicting the likelihood of multiple sexual partnerships in the 12 months prior to the study. The prediction model including the four independent variables shown

in Table 5 was statistically significant ($p=0.000$) in predicting inconsistent condom use. The model correctly classified 71.2% of the cases, and explained 14.8% (Nagelkerke R^2) of the variance in consistency of condom use.

Table 5: Logistic regression analysis predicting the likelihood of multiple sexual partnerships in the 12 months prior to the study

Predictor variable	B	S.E.	Wald	df	Sig. (p)	Odds Ratio	95% C.I. for Odds Ratio	
							Lower	Upper
Sexual debut	-.361	.128	7.931	1	.005	.697	.543	.896
Alcohol consumption	.278	.168	2.739	1	.098	1.321	.950	1.836
Heavy episodic drinking	.065	.166	.154	1	.695	1.067	.771	1.478
Childhood sexual abuse	.845	.348	5.904	1	.015	2.328	1.178	4.603

Table 5 reflects that, of the four independent variables entered into the prediction model, only two were statistically significant in predicting the likelihood of multiple sexual partnerships in the 12 months prior to the study. These significant predictors were sexual debut (OR=0.697, $p=0.005$) and childhood sexual abuse (OR=2.328, $p=0.015$). These results indicate that a lower age at sexual debut is associated with greater likelihood of reporting multiple sexual partnerships in the 12 months prior to the study. They also show that students who reported childhood sexual abuse were 2.3 times more likely to have had multiple sexual partners in the 12 months prior to the study. Alcohol consumption ($p=0.098$) did not have a significant effect on the likelihood of multiple sexual partnerships in the year prior to the study, and neither did heavy episodic drinking ($p=0.695$).

4.10.4 Logistic regression analysis results for transactional sex

Logistic regression analysis carried out to identify factors that predict the likelihood of transactional sex produced the results displayed in Table 6 below. Sexual debut, general alcohol consumption, heavy episodic drinking, and childhood sexual abuse were entered as the independent variable. The prediction model was statistically significant ($p=0.000$) in predicting transactional sex. The model correctly classified 80.0% of the cases, and explained 37.7% (Nagelkerke R^2) of the variance in transactional sex.

Table 6: Logistic regression analysis predicting the likelihood of transactional sex

Predictor variable	B	S.E.	Wald	df	Sig. (<i>p</i>)	Odds Ratio	95% C.I. for Odds Ratio	
							Lower	Upper
Sexual debut	-.151	.156	.944	1	.331	.860	.634	1.166
Alcohol consumption	.211	.203	1.090	1	.296	1.236	.831	1.838
Heavy episodic drinking	.368	.181	4.120	1	.042	1.445	1.013	2.061
Childhood sexual abuse	1.490	.399	13.925	1	.000	4.439	2.029	9.710

Childhood sexual abuse (OR=4.439, $p=0.000$) significantly predicted transactional sex, with individuals who reported childhood sexual abuse being 4.5 times more likely to engage in transactional sex than those who did not. There was also evidence that heavy episodic drinking (OR=1.445, $p=0.042$) is associated with an increase in the likelihood of engaging in transactional sex. A one unit increase in the reported frequency of heavy episodic drinking increased the likelihood of transactional sex by a factor of 1.4. There was no evidence to show that either sexual debut ($p=0.331$) or alcohol consumption ($p=0.296$) had any effect on the likelihood of engaging in transactional sex.

4.10.5 Logistic regression analysis results for intergenerational sex

When the predictor variables of sexual debut, alcohol consumption, heavy episodic drinking and childhood sexual abuse were entered in a logistic regression analysis to predict the likelihood of intergenerational sex, the model was statistically significant ($p=0.000$). The prediction model explained 29.8% (Nagelkerke R^2) of the variance in intergenerational sex, and correctly classified 82.8% of the cases. Of the four predictor variables, two were statistically significant in predicting the likelihood of intergenerational sex.

Table 7: Logistic regression analysis predicting the likelihood of intergenerational sex

Predictor variable	B	S.E.	Wald	df	Sig. (<i>p</i>)	Odds Ratio	95% C.I. for Odds Ratio	
							Lower	Upper
Sexual debut	.023	.147	.023	1	.878	1.023	.767	1.364
Alcohol consumption	.700	.209	11.177	1	.001	2.014	1.336	3.036
Heavy episodic drinking	-.229	.185	1.521	1	.217	.796	.553	1.144
Childhood sexual abuse	1.912	.372	26.466	1	.000	6.769	3.267	14.025

Alcohol consumption (OR=2.014, $p=0.001$) was a statistically significant predictor of intergenerational sex. According to the results of the analysis, a one unit increase in the level of alcohol consumption selected was associated with a doubling in the likelihood of engaging in intergenerational sex. Childhood sexual abuse (OR=6.769, $p=0.000$) was also significant in predicting intergenerational sex, with individuals who had a history of childhood sexual abuse being almost 7 times more likely to report engaging in intergenerational sex. Sexual debut ($p=0.878$) and heavy episodic drinking ($p=0.217$) were not associated with intergenerational sex.

4.11 CHAPTER SUMMARY

This chapter presented the data obtained from the questionnaire and the results of data analysis. The data collected from each question was summarized using descriptive statistics and presented in tables and graphs. This included information on participants' demographic characteristics, sexual debut, number of sexual partners, condom use, alcohol consumption, heavy episodic drinking, childhood sexual abuse, transactional sex, and intergenerational sex. Binomial logistic regression analyses were carried out to determine the predictors of each of the high risk sexual behaviours using IBM SPSS Statistics version 23. Results obtained were presented in sections dedicated to each high risk sexual behaviour. The significant predictors for each high risk sexual behaviour were identified. The results presented in this chapter will be discussed in the next chapter. Following this discussion, conclusions will be given. The researcher will conclude Chapter 5 by giving recommendations concerning HIV prevention programmes as well as future research areas.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this chapter is to discuss the results of this study. The discussion will be guided by the research questions given in the first chapter, which the researcher will answer based on the results presented in Chapter Four. The researcher will proceed to give overall conclusions to this study. Finally, recommendations will be given based on the findings of this study.

5.2 PREVALENCE OF HIGH RISK SEXUAL BEHAVIOURS AT MIDLANDS STATE UNIVERSITY

The first objective of this study was to determine the prevalence of high risk sexual behaviours among undergraduate university students at Midlands State University. First, the percentage of students in the sample who were sexually experienced was calculated. The prevalence of the high risk sexual behaviours of inconsistent condom use, multiple sexual partnerships, transactional sex, and intergenerational sex among the sexually experienced students were then calculated.

5.2.1 Sexually experienced students

Results showed that 65.62% of the students in the sample were sexually experienced. Compared to studies done internationally, this figure remains lower than the 71% found in USA (Flannery & Ellingson, 2003), 83.3% in Portugal (Reis et al, 2013), and 99% in Sweden (Tyden, Palmqvist & Larrson, 2012). However, the figure found in this study is much higher than the 28.4% of undergraduate university students at an Ethiopian university who were sexually active (Dingeta, Oljira, & Assefa, 2012), as well as the 36.4% of students at another Ethiopian university (Mulu, Yimer, & Abera, 2014). It is also significantly higher than the 46.7% of students who were sexually experienced at a university in South Africa (Porter, Johnson, & Petrillo, 2009). However, the proportion of students who were sexually experienced in the study is consistent with those found at universities in Nigeria (Omoteso, 2006) and Uganda (Choudhry et al, 2014). The figure found in this study is even lower than the 80% reported in Madagascar (Rahamefy, et al, 2008), and the 74% reported in South Africa by Heeren et al (2012). Katsinde,

Chidyamatamba and Katsinde (2011) reported that 96% of a sample of undergraduate university students at Bindura University of Science Education in Zimbabwe were sexually experienced. However, the discrepancy between their figure and that found in this study may be explained by the difference in the samples – they included only fourth year students in their study, while this research included first, second and fourth year undergraduate students.

Despite its middle ranking position in the range of figures reported for sexually experienced undergraduate students in different countries worldwide, it remains a point to note that 2 in every 3 undergraduate university students at Midlands State University is sexually experienced. It is also noteworthy that over 60% of these sexually experienced students had their sexual debut before 19 years of age, with a third of them reporting their sexual debut at 17 to 18 years of age. This underscores the need for sex education and HIV prevention programmes to begin in high schools, especially targeting students between the ages of 15-18 years old, so that they are informed of the impact of their sexual choices on their health and empowered with information on healthy sexual practices.

5.2.2 Prevalence of inconsistent condom use

In most cases, inconsistent condom use is one of the most prevalent high risk sexual behaviours among sexually active young adults. This study was no exception, with 70% of the sexually experienced students reporting that they either did not use condoms at all, or used them inconsistently. This reveals that inconsistent condom use is highly prevalent among sexually active students at Midlands State University. Inconsistent condom use is more prevalent at this university than in universities in Ethiopia (Mulu, Yimer, & Abera, 2014; Tiruneh, 2004), and Kenya (Othieno et al, 2015). It is also higher than the 68.2% reported in Nigeria (Imaledo, Peter-Kio & Asuquo) and the 64.6% reported in South Africa (Peltzer, 2000). Such high prevalence was also reported by Katsinde, Chidyamatamba and Katsinde (2011) among the sexually active fourth year students at a university in Bindura, Zimbabwe. This is a cause for concern, as not using a condom during a sexual encounter allows for direct transmission of HIV. Strategies that focus on promotion of condom use need to be emphasised in HIV prevention programmes targeting university students.

5.2.3 Prevalence of multiple sexual partnerships

Multiple sexual partnerships were highly prevalent among sexually experienced students in this study, with more than three quarters reporting that they had had more than one sexual partner in their lifetime. This is much higher than the 65% reported by Katsinde, Chidyamatamba and Katsinde (2011) among fourth year students at a Zimbabwean university. It is also higher than the prevalence of 58.7% found at a university in South Africa (Porter, Johnson & Petrillo, 2009), and that of 29% in Madagascar (Rahamefy et al, 2008). The prevalence of multiple sexual partnerships in the 12 months preceding the study was also higher than those reported by other studies (Choudhry, et al, 2014; Hoque, 2011), with just over 42% of the students having had more than one sexual partner in the 12 months prior to the study. This reflects higher prevalence of multiple sexual partnerships in the 12 months prior to the study than the 30% reported by Othieno et al (2015) in Kenya. Since multiple sexual partnerships create sexual networks that accelerate the transmission of HIV, such a high prevalence of this risky sexual behaviour is cause for concern.

5.2.4 Prevalence of transactional sex

The least prevalent of the high risk sexual behaviours in this study was transactional sex. Less than a quarter of the sexually experienced students had engaged in transactional sex. However, this prevalence is much higher than the 7.4% found by Mulu, Yimer and Abera (2014) at an Ethiopian university, and the 7.8% reported by Rahamefy et al (2008) among university students in Madagascar.

5.2.5 Prevalence of intergenerational sex

This study found that 22.8% of sexually active students reported that they had had sex with individuals 10 or more years older than them. As discussed in Chapter 2, intergenerational sexual relationships increase the risk of HIV transmission, as older partners are more likely to have had previous sexual experience and been exposed to HIV (Campbell, 2009). Choudhry et al (2014) proposed that intergenerational sexual partnerships are prevalent in African university settings. Katsinde, Chidyamatamba and Katsinde (2011) also say that sexual relationships with older male partners are common among female university students. However, none of these studies attempted to determine the actual prevalence of intergenerational sex among university students.

5.3 PREDICTORS OF HIGH RISK SEXUAL BEHAVIOURS

The significance of alcohol use, heavy episodic drinking, childhood sexual abuse, and sexual debut as predictors of each of the high risk sexual behaviours was determined using statistical analysis, and the results presented in Chapter 4. The relationship between each of these predictors and the high risk sexual behaviours will be discussed below.

5.3.1 Relationship between alcohol use and high risk sexual behaviours

Alcohol use was considered along two dimensions in this study, first as the general frequency of alcohol use, and second as the frequency of heavy episodic drinking, or binge drinking.

5.3.1.1 General alcohol consumption and high risk sexual behaviours

The results of this study show that alcohol use is a significant predictor of multiple lifetime sexual partners and intergenerational sex. Othieno et al (2015) also found evidence for this association between alcohol use and multiple sexual partnerships, as did Nkansah-Amankra et al (2011). The association between alcohol use and multiple sexual partners was also reported by Choudhry et al (2014). They suggest that this might be because the social environments in which alcohol is consumed provide opportunity for meeting new sex partners. This suggestion is also put forward by the World Health Organisation, (WHO, 2005), who say that venues that serve alcohol may serve as contact places for sexual encounters. This explanation may be extended to include the association between alcohol use and intergenerational sex. It may be the case that the places where students get alcohol provide opportunity for them to meet sexual partners who are much older than they are. However, further research is necessary to determine the reasons for the association between alcohol use and intergenerational sex.

The association between alcohol consumption and risky sexual behaviours like multiple sexual partnerships and intergenerational sex is consistent with the problem behaviour theory discussed in Chapter 2, which puts forward the assertion that high risk sexual behaviours often co-occur with other deviant behaviours such as substance use (Tiruneh, 2004). There is indeed an association between alcohol use and high risk sexual behaviours, both of which are problem behaviours.

5.3.1.2 Heavy episodic drinking and high risk sexual behaviours

Some studies, for example that by Sammarco et al (2007) in Italy, reveal an association between alcohol use and inconsistent condom use. While this association was not significant for general frequency of alcohol consumption in this study, there was indeed an association between heavy episodic drinking and inconsistent condom use, with higher frequency of heavy episodic drinking being linked to increased likelihood of inconsistent condom use. These results are in line with the alcohol myopia theory, which suggests that alcohol use makes individuals focus on immediate situational cues such as sexual arousal and pleasure, at the expense of distal inhibitory cues such as the possibility of STIs or pregnancy (Brown & Vanable, 2007). This would make individuals less likely to think of using condoms during sexual encounters when they have had a substantial amount of alcohol. Mulu, Yimer and Abera (2014) also point out that alcohol consumption affects one's ability to make rational choices and consider the consequences of one's actions. This may also explain why heavy episodic drinking was associated with transactional sex, as individuals were more likely to engage in sexual encounters with sex workers when they were intoxicated and were not thinking about the risk of STI and HIV transmission.

While the results of this research reveal a global association between heavy episodic drinking and inconsistent condom use, there is still need for further studies in this area that focus on event-level associations between alcohol consumption and condom use. This is explained by Cooper (2002) as an assessment of whether consuming alcohol at a given occasion increases the likelihood of not using a condom during sexual encounters in that instance.

5.3.2 Relationship between childhood sexual abuse and high risk sexual behaviours

Childhood sexual abuse was found to be predictive of three of the four high risk sexual behaviours in this study, that is, multiple sexual partnerships, intergenerational sex, and transactional sex. Othieno et al (2015) also reported an association between childhood sexual abuse and multiple sexual partnerships, with individuals who had experienced sexual abuse as a child being more likely to have multiple sexual partners than those who had not. Senn, Carey and Conry-Doniger (2011) similarly found that childhood sexual abuse was predictive of multiple

sexual partnerships. However, contrary to findings by Senn, Carey and Conry-Doniger (2011), and Tiruneh (2004), childhood sexual abuse was not found to be a significant predictor of inconsistent condom use in this study.

This study revealed that university students who had experienced childhood sexual abuse were almost 7 times more likely to engage in intergenerational sex, and 4 times more likely to engage in transactional sex, than students who did not have a history of childhood sexual abuse. This reflects a strong association between childhood sexual abuse and these high risk sexual behaviours. The Saskatchewan Prevention Institute cites self-blame and low self-esteem in survivors of childhood sexual abuse as possible causes of engaging in high risk sexual behaviours in adulthood (Saskatchewan Prevention Institute, 2012). Childhood sexual abuse experiences are associated with high risk sexual behaviours in adulthood (Senn, Carey & Conry-Doniger, 2011), particularly multiple sexual partnerships, intergenerational sex, and transactional sex, suggesting that the psychological distress brought on by childhood sexual abuse continues to have far reaching consequences into adulthood (Kotchick et al, 2001). Childhood sexual abuse is a psychological influence on sexual risk behaviour, as explained by the multi-system perspective of sexual risk behaviour. According to this theory, a history of victimisation, and the psychological distress associated with it, go on to exert an influence on sexual behaviours in adulthood (Kotchich et al, 2001). The results obtained in this study are therefore consistent with the multi-system perspective of sexual risk behaviour, which points to psychological factors as influences on sexual risk behaviour.

5.3.3 Relationship between sexual debut and high risk sexual behaviours

Previous behaviours tend to exert an effect on present behaviours, and the behaviour of sexual debut was included as a potential predictor of high risk sexual behaviours. Indeed, sexual debut was predictive of inconsistent condom use and multiple sexual partnerships. Lower age at sexual debut increased the likelihood of multiple sexual partnerships, both in one's lifetime and in the 12 months prior to the study. Early sexual debut is one of the behavioural factors that influence sexual risk behaviour, according to the multi-system perspective of sexual risk behaviour (Kalina, 2012).

The results obtained in this study are consistent with findings by Ratliff-Crain, Donald and Dalton (1999), who reported the same association between early sexual debut and multiple

sexual partnerships as well as inconsistent condom use. Campbell (2009) also stated that early sexual initiation was associated with an increase in an individual's lifetime sexual partners. The same author found an association between early sexual debut and inconsistent condom use, as was the case in this study. Initiation of sexual intercourse before age 14 was also linked to inconsistent condom use in a study by Jovic et al (2014). This is in concurrence with Kalina (2012)'s assertion that early sexual debut is significant in influencing the sexual behaviour of young adults. In light of this, it is concerning that almost 62% of the sexually experienced students had initiated sexual activity before the age of 19 years.

5.4 CONCLUSIONS

This study intended to determine the prevalence of high risk sexual behaviours among undergraduate university students at Midlands State University, as well as identify some of the predictors of these high risk sexual behaviours. Over 3 in every 5 students at Midlands State University is sexually experienced, with 61.6% of them having initiated sexual activity before the age of 19 years. Over 75% of the sexually experienced students had multiple lifetime sexual partners, and 42% reported multiple sexual partnerships in the 12 months prior to the study. Only 30% of sexually experienced students reported consistent condom use during sexual encounters, showing that the vast majority either did not use condoms altogether, or used them inconsistently. 22.4% of the students had engaged in transactional sex, and 22.8% had engaged in intergenerational sex. The prevalence of high risk sexual behaviours at Midlands State University is generally very high compared to other university populations. In light of this, it is no wonder that the HIV infection rates remain high among people in the 20-29 age group in Zimbabwe (NAC, 2014). University students are definitely a sub-population of interest in national HIV prevention efforts.

Lower age at sexual debut was found to predict multiple sexual partnerships, both in one's lifetime and in the 12 months prior to the study, as well as inconsistent condom use. Higher frequency of alcohol use was a significant predictor of multiple sexual partnerships in one's lifetime as well as intergenerational sex. Heavy episodic drinking was associated with increased likelihood of inconsistent condom use as well as transactional sex. Finally, childhood sexual abuse was found to be linked to multiple sexual partnerships in the 12 months prior to the study. Individuals who reported a history of childhood sexual abuse were also 4 times more likely to

engage in transactional sex and almost 7 times more likely to engage in intergenerational sex. All four factors included in this study were therefore significant predictors of high risk sexual behaviours among undergraduate university students at Midlands State University.

5.5 RECOMMENDATIONS

The researcher makes the following recommendations based on the findings of this study:

- The counselling department of the Midlands State University should make an effort to implement screening and intervention for students who have a history of childhood sexual abuse. In some cases these students may never have had an opportunity to work through the emotional trauma and psychological distress that is associated with these experiences. Screening and intervention would prevent continued negative effects of childhood sexual abuse on young adults' sexual and reproductive health choices.
- HIV prevention programmes meant for university students should target those students who consume alcohol regularly, and engage in heavy episodic drinking. Perhaps the social venues where alcohol is consumed may be appropriate places to remind individuals of the risks associated with sexual behaviours such as inconsistent condom use, multiple sexual partnerships, intergenerational sex, and transactional sex.
- Since most of the sexually experienced students at Midlands State University reported a sexual debut of lower than 19 years of age, sexual and reproductive health programs targeted at teenagers are vital. Teenagers and high-school going youth should receive information on the implications of their sexual health choices, and be empowered with the social and personal skills necessary to make healthy choices concerning their sexual and reproductive health.
- Further research is necessary on the social predictors of high risk sexual behaviours, including such things as accommodation status, peer norms, and source of sex information. Studies should also be done to determine the effects of demographic characteristics such as sex, age and socioeconomic background on high risk sexual behaviours.

5.6 CHAPTER SUMMARY

This final chapter of the study discussed the results that were obtained. The prevalence of high risk sexual behaviours was compared to figures obtained in other universities, and found to be higher than most reported figures. Sexual debut, alcohol use, and childhood sexual abuse were

all found to be significant predictors of the high risk sexual behaviours included in this study, and the possible explanations for this were given. The researcher then proceeded to give recommendations on HIV prevention programmes based on the findings of this study, as well as suggest areas for future research.

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APPENDIX A: RESEARCH INSTRUMENT

HIV RISK BEHAVIOUR QUESTIONNAIRE FOR UNDERGRADUATE UNIVERSITY STUDENTS

Please answer the following questions as honestly as you can by circling the appropriate response. All information you provide will be kept strictly confidential, and will be used only for the purposes of this study, as aggregated data with information supplied by all the other participants. No identification information is required of you.

1. How old are you? (Age at last birthday) _____ (years)
2. What is your sex? Female Male
3. What is your marital status?
Never been married Married Separated
Divorced Widowed
4. What is your current year of study at university?
1st year 2nd year 3rd year 4th year
5. How old were you when you had sexual intercourse for the first time?
I have never had sexual intercourse 12 years old or younger
13 or 14 years old 15 or 16 years old
17 or 18 years old 19 or 20 years old
21 to 24 years old 25 years old or older
6. During your life, with how many people have you had sexual intercourse?
I have never had sexual intercourse 1 person
2 people 3 people
4 people 5 people
6 or more people
7. During the past 12 months, with how many people have you had sexual intercourse?
I have never had sexual intercourse
I have had sexual intercourse, but not during the past 12 months
1 person 2-3 people 4-5 people
6 or more people
8. During the past 12 months, how often did you or your partner use a condom during sexual intercourse?

I have not had sexual intercourse during the past 12 months

Never used a condom

Rarely used a condom

Sometimes used a condom

Most of the time we used a condom

Always used a condom

9. The last time you had sexual intercourse, did you or your partner use a condom?

I have never had sexual intercourse

Yes

No

10. How often have you consumed alcohol during the past 12 months?

Four times a week or more

Two to three times a week

Three to four times a month

Once a month or seldom

Never

11. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?

0 days

1-2 days

3-5 days

6-9 days

10-19 days

20 or more days

12. Before your 13th birthday, did an adult or someone at least five years older than you ever touch the sex organs of your body when you did not want this?

Yes

No

13. Before your 13th birthday, did an adult or someone at least five years older than you ever make you touch the sex organs of their body when you did not want this?

Yes

No

14. Before your 13th birthday, did an adult or someone at least five years older than you ever have sexual intercourse (including vaginal or anal intercourse) with you when you did not want this?

Yes

No

15. Have you ever paid someone to have sex with you?

Yes

No

16. Have you ever had sex with an individual 10 or more years older than you?

Yes

No

Thank you for taking the time to participate in this study.

APPENDIX F: MARKING GUIDE
MIDLANDS STATE UNIVERSITY
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF PSYCHOLOGY

A GUIDE FOR WEIGHTING A DISSERTATION

Name of Student **YVONNE MANYUMWA**

REG NO **R12962Z**

	ITEM	Possible Score	Actual Score	Comment
A	RESEARCH TOPIC AND ABSTRACT clear and concise	5		
B	PRELIMINARY PAGES: Tittle page, approval form, release form, dedication, acknowledgements, appendices, table of contents.	5		
C	AUDIT SHEET PROGRESSION Clearly shown on the audit sheet	5		
D	CHAPTER 1 :Background, statement of problem, significance of the study, research questions, objectives, hypothesis, assumptions, purpose of the study, delimitations, limitations, definition of terms	10		
E	CHAPTER 2: Addresses major issues and concepts of the study. Findings from previous work, relevancy of the literature to the study, identifies knowledge gap, subtopics	15		
F	CHAPTER 3:Appropriateness of design, target population, population sample, research tools, data collection, procedure, presentation and analysis	15		
G	CHAPTER 4:Findings presented in a logical manner, tabular data properly summarized and not repeated in the text	15		
H	CHAPTER 5 :Discussion (10) Must be a presentation of generalizations shown by results: how results and interpretations agree with existing and published literature, relates theory to practical, implications, conclusions (5) Ability to use findings to draw conclusions .Recommendations (5)	20		
I	Overall presentation of dissertation	5		
J	References	5		
	TOTAL	100		

MARKER.....SIGNATURE.....DATE.....

MODERATOR.....SIGNATURE.....DATE.....



NOW VIEWING: HOME > AUGUST-DECEMBER 2015

Welcome to your new class homepage! From the class homepage you can see all your assignments for your class, view additional assignment information, submit your work, and access feedback for your papers. Hover on any item in the class homepage for more information.

Class Homepage

This is your class homepage. To submit to an assignment click on the "Submit" button to the right of the assignment name. If the Submit button is grayed out, no submissions can be made to the assignment. If resubmissions are allowed the submit button will read "Resubmit" after you make your first submission to the assignment. To view the paper you have submitted, click the "View" button. Once the assignment's post date has passed, you will also be able to view the feedback left on your paper by clicking the "View" button.

Assignment Inbox: August-December 2015			
Info	Dates	Similarity	
Dissertation	Start <u>06-Aug-2015 5:24PM</u> Due <u>17-Dec-2015 11:59PM</u> Post <u>18-Dec-2015 12:00AM</u>	14%	<input type="button" value="Resubmit"/> <input type="button" value="View"/> <input type="button" value=""/>

The Registrar
Midlands State University
P. Bag 9055
Gweru

8 September 2015

Dear Sir,

**RE: REQUEST FOR APPROVAL TO COLLECT RESEARCH DATA FROM
MIDLANDS STATE UNIVERSITY UNDERGRADUATE STUDENTS**

This letter serves to request permission to carry out data collection for my dissertation at Midlands State University.

I am a fourth year student studying Psychology at Midlands State University, and am carrying out a dissertation with the title "Prevalence and predictors of high-risk sexual behaviour among undergraduate university students at Midlands State University". The aim of this research is to determine the prevalence of certain high risk sexual behaviours among undergraduate students at the university, as well as determine whether a predictive relationship exists between these sexual behaviours and alcohol use, age at initiation of sexual activity, and a history of childhood sexual abuse. The results of this study will assist in formulating targeted HIV prevention programs that take into account the factors specific to university students that affect their sexual behaviour choices.

Data is to be collected from undergraduate students at the university's main campus using a questionnaire. All data collected will be treated with strict confidentiality, and will be used only for the purposes of this research.

Your assistance in this regard is greatly appreciated.

Yours faithfully,

Yvonne Manyumwa

Yvonne Manyumwa (R129627)

Approved
[Signature]
Roe

Midlands State University

Established 2000



P BAG 9055
GWERU

Telephone: (263) 54 260404 ext 261
Fax: (263) 54 260233/260311

FACULTY OF SOCIAL SCIENCES DEPARTMENT OF PSYCHOLOGY

Date...7 September 2015

To whom it may concern

Dear Sir/Madam

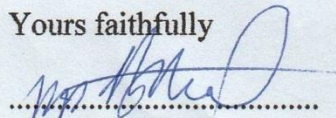
RE: REQUEST FOR ASSISTANCE WITH DISSERTATION INFORMATION
FOR.....YVONNE MANYUMWA.....
BACHELOR OF PSYCHOLOGY HONOURS DEGREE

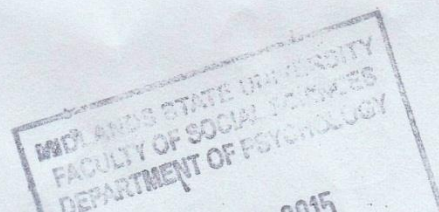
This letter serves to introduce to you the above named student who is studying for a Psychology Honours Degree and is in his/her 4th year. All Midlands State University students are required to do research in their 4th year of study. We therefore kindly request your organisation to assist the above-named student with any information that they require to do their dissertation.

Topic: PREVALENCE AND PREDICTORS OF HIGH-RISK SEXUAL
BEHAVIOUR AMONG UNDERGRADUATE UNIVERSITY STUDENTS AT

For more information regarding the above, feel free to contact the Department.

Yours faithfully


.....
F. Ngwenya
Chairperson



APPENDIX D: AUDIT SHEET

MIDLANDS STATE UNIVERSITY

SUPERVISOR- STUDENT AUDIT SHEET

DATE	TOPIC DISCUSSED	COMMENT	STUDENT'S SIGNATURE	SUPERVISOR'S SIGNATURE
4/05/2015	PROPOSAL	Rework	Mauya	[Signature]
26/06/2015	PROPOSAL	Proceed	Mauya	[Signature]
8/07/2015	CHAPTER 1	Rework	Mauya	[Signature]
15/08/2015	CHAPTER 1	Proceed	Mauya	[Signature]
3/08/2015	CHAPTER 2	Rework	Mauya	[Signature]
10/08/2015	CHAPTER 2	Proceed	Mauya	[Signature]
29/08/2015	CHAPTER 3	Rework	Mauya	[Signature]
1/09/2015	CHAPTER 3	Proceed	Mauya	[Signature]
3/09/2015	RESEARCH INSTRUMENT	Rework	Mauya	[Signature]
4/09/2015	RESEARCH INSTRUMENT	Proceed	Mauya	[Signature]
27/09/2015	CHAPTER 4	Rework	Mauya	[Signature]
28/09/2015	CHAPTER 4	Proceed	Mauya	[Signature]
30/09/2015	CHAPTER 5	Rework	Mauya	[Signature]
7/10/2015	CHAPTER 5	Proceed	Mauya	[Signature]
11/10/2015	FIRST DRAFT	Rework	Mauya	[Signature]
13/10/2015	SECOND DRAFT	Proceed	Mauya	[Signature]
15/10/2015	FINAL DRAFT	Submit	Mauya	[Signature]

STUDENT'S SIGNATURE Mauya

SUPERVISOR'S SIGNATURE [Signature]

