

**ASSESSMENT OF SEXUAL BEHAVIOUR AND
KNOWLEDGE OF HIV AMONGST ADOLESCENT
SCHOOLGIRLS IN A RURAL DISTRICT IN ZAMBIA**

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ABSTRACT

Adolescents' sexual activity is associated with maternal and child health problems, and sexually transmitted infections including HIV/AIDS. The aim of this study was to assess the sexual behaviour patterns of adolescent schoolgirls and the level of knowledge they have with regard to the prevention and transmission of HIV infection, as well as to determine which factors are associated with their various sexual behaviour patterns. A cross-sectional descriptive survey of 420 adolescent schoolgirls aged 15 to 19 years, from 3 of the 9 secondary schools situated in Petauke District, in rural Zambia, was conducted. The sample of schoolgirls was obtained using a multi-stage systemic sampling technique.

Fifty one percent of the sample lived with both parents and 40% had 'ever had sex' with the average age at first sexual intercourse being 16 years. The desire to experiment was stated by 48% of the sexually active schoolgirls as being their main motive for engaging in their first act of sexual intercourse. Twenty two percent of the sexually active schoolgirls reported that they were forced into their first act of sexual intercourse. Fifty eight percent of the sexually active schoolgirls had only one sexual partner during their lifetime. Sixty four percent of the sexually active had practiced unsafe sex, yet only 18% of them thought that they were at risk of contracting HIV. Only 49% of schoolgirls used a condom during their last act of sexual intercourse, while 14% of all schoolgirls and 21 % of the sexually active thought that using a condom was a sign of mistrust. A large percentage (65%) of all the schoolgirls thought that the availability of condoms encourages adolescents to engage in sexual intercourse. Sixty nine percent of sexually active schoolgirls had sufficient knowledge regarding how HIV was transmitted but only 31% knew how to prevent contracting HIV and only 18% of those not sexually active knew how to prevent contracting HIV. Almost all schoolgirls (99%) thought that cleaning the vagina after sexual intercourse would not decrease the risk of HIV infection. Magazines and friends were the main

source of information on sexual matters, with 51% of the sexually active and 46% of those not sexually active having these as their main source of information.

Seventy one percent of the sexually active reported that they had a regular boyfriend while only 12% of those not sexually active reported having a regular boyfriend. Amongst the sexually active, 6% had a teacher as their regular boyfriend. Eight six percent of schoolgirls had their first act of sexual intercourse with a fellow adolescent and 3% had it with a teacher. The prevalence ratios 1.6 (CI = 1.4-1.8) and 1.4 (CI = 1.2-1.6) indicated that schoolgirls older than 16 years were more likely to have ever had sexual intercourse and to have a regular boyfriend, respectively. It was also shown that schoolgirls who had undergone initiation ceremonies were more likely to have ever had sex, prevalence ratio 1.3 (CI = 1.1-1.6).

Given the high level of sexual activity (40%), the increase of sexual activity with age, the high prevalence of risky sexual activity and the low level of knowledge about how to prevent HIV infection, the task of improving sexual education and life skills should be engaged with. Based on the findings of this study, three main recommendations were addressed to the health, educational and community authorities, in relation to the provision of appropriate evidence-based life skills education to both schoolgirls and schoolboys.

DECLARATION

I declare that *Assessment of Sexual Behaviour and Knowledge of HIV amongst Adolescent Schoolgirls in a rural District in Zambia* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Dr. Mutombo Dhally Menda

December 2006



Signed



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CHAPTER 1: INTRODUCTION

With this study, I attempted to obtain insights into rural Zambian adolescent schoolgirls' sexual behaviour and to assess their level of knowledge of HIV.

Since this study took place in Zambia, I have started by providing a profile of Zambia, in terms of geographic location, demography, economy, education and health status and will then provide a brief profile of the rural district of Petauke.

I then discussed the HIV/AIDS profile at global, regional and national levels. This is followed by a discussion on the issues of sexual behaviour and knowledge of HIV amongst Zambian adolescents. The sexual behaviour and knowledge on HIV of female adolescents is then explored.

To end this chapter, I have outlined the research problem and have described the guiding purpose of this study.

1.1. a. ZAMBIA PROFILE

Zambia is a landlocked country situated on the great plateau of Central Africa and it shares borders with 8 countries. It has a total population of 10.3 million, a growth rate of 2.9% per annum, and a population density of 13.7 per square kilometer (CSO and ORS, 2003b). Zambia is administratively divided into 9 provinces and 72 districts.

The country has a mixed economy, consisting of a modern urban sector and a rural agricultural sector, with much of the development happening along the "line of rail", which runs from the resource-rich Copperbelt in the north to the capital city Lusaka in the central area, and down through to the south of the country. Since the 1980s there has been a general economic decline following a sharp decline in copper prices and this decline was exacerbated by the introduction of world bank imposed Structural Adjustment Programmes and by an increase in oil prices.

Currently, around 73% of Zambians are classified as poor, with poverty being more prevalent in rural areas than urban ones (83% and 56%, respectively) (CSO and ORC, 2003b).

This state of economic hardship has worsened since then and resulted in major cutbacks in capital development in the health services, as well as shortages in drugs and equipment (Koot and Martineau, 2005). At Independence, health services in Zambia were concentrated almost exclusively in urban areas with one doctor on average for every 11,400 people and by 1984 the average was one doctor for every 7,000 people (African Economic Outlook, 2004). This situation has since worsened as a mass exodus of skilled personnel to neighbouring countries, has left the country with almost half of the established posts for doctors, nurses and clinical officers vacant (Koot and Martineau, 2005).

Health indicators in Zambia are extremely poor, with the heavy burden of HIV/AIDS reversing earlier improvements in life expectancy and mortality. The 2001/2002 health survey indicated a deterioration of the under-five mortality rate from 162 per 1 000 in year 2000 to 168 per 1 000 in year 2002, and Malaria, which remains the number one diagnosis in health facilities accounting for 48% of under-five outpatient visits and 42% of attendances among other ages, experienced an incidence increase from 80 per 1000 in year 2000 to 110 per 1 000 in year 2003 (African Economic Outlook, 2004).

The HIV/AIDS pandemic has been accompanied by an overwhelming increase in tuberculosis cases, with a notification rate of over 500 per 100,000. Malnutrition has grown over the past decade, with an estimated 42% of under-fives stunted, of whom 18% are severely stunted. Maternal mortality remains high (estimated as 729 maternal deaths per 100,000 live births (CSO and ORC, 2003b)), and is largely attributed to preventable conditions such as malaria, and anaemia, together with obstetric and abortion-related complications (Lake, 2000).

As for the educational sector, the country has maintained its three-tiered education system with a female enrolment rate at all the three levels lower than that of males, and a female drop-out rate higher than that of men, leaving only 20% of girls educated beyond primary school.

There isn't a big gender disparity in net-enrolment for primary education (male 76%, female 75%), but the gender disparity appears at the lower-secondary level (male 31%, female 19%) and persists up to the higher education level, where the female enrolment rate for university is one-fourth the male rate (JICA, 1998).

1.1. b. PETAUKE DISTRICT PROFILE

This study was conducted in Petauke district which is situated in the Eastern Province and is approximately 450 Km from Lusaka, the capital city of Zambia. I decided to conduct this study in Petauke district where I have been working as a medical officer for the past 11 years, because this district has been using and applying urban based findings on adolescent schoolgirls' sexual behaviour and their related interventions, to rural adolescent schoolgirls, without to my knowledge any assessment as to whether they are appropriate or not.

With a total population of 242,533 (80% subsistence farmers) and having a full-fledged government department consisting of most of the government ministries (GRZ and UNDP, 2002), the district has a poverty index of 0.913 and is ranked as the eleventh poorest district in the country. Six Chiefs rule over the majority Nsenga and large minority Chewa indigenous ethnic groups occupying the area. The main languages spoken are Nsenga, Chewa, Nyanja and English.

The district has a total of 108 schools, 98 primary/ basic and 10 secondary, of which only 9 offer grade 8-12 education to girls (PDHMB, 2004). With three hospitals (all first level), the district has 24 rural health centres and 142 outreach stations which provide mainly child immunization, maternal health and family planning services. The major causes of morbidity and mortality are malaria, respiratory tract infection, diarrhea, anaemia, tuberculosis and STI/HIV/AIDS (PDHMB, 2004).

1.2. STI and HIV/AIDS PROFILE

Sexually Transmitted Infections (STIs) and Human Immunodeficiency Virus (HIV) infection, remain the major causes of global morbidity and mortality among adolescents, and are amongst the commonest health problems in the area of sexual and reproductive health in the world today (WHO, 2000).

Of the three main ways of HIV transmission, the transmission through unprotected sexual intercourse concerns us most in this study. Physiologically, women are more vulnerable to HIV infection (twice as likely as men) (UNDP, 2004) because they are more likely to develop micro-lesions during sexual intercourse. This risk is increased in young girls because of their underdeveloped reproductive systems, especially when sex is coerced (UNDP, 2004). This physiological vulnerability is enhanced by socio-cultural and economic factors that hinder women, young and old, from being informed on sexual risk reduction and from being empowered both culturally and economically.

In her paper, Madlala, S.L. (2002) wrote:

One approach to the understanding of the AIDS pandemic in the current context of 21st century Africa is to regard it as an example of old ways and new influences that have combined in such a way as to have dire consequences for millions of people. The pandemic can be viewed as a result of pre-existing patterns of sexual culture and gender inequalities combining with ongoing experiences of labour migration, urbanization, civil strife, growing poverty and family disintegration, as well as the more recent influences resulting from increased access to foreign cultural and media programmes and new opportunity for acquiring and demonstrating wealth. Together, these components have interlocked in such a way as to form a lethal context that has propelled the spread of HIV/AIDS unequalled anywhere else in the world. (Madlala, 2002).

By December 2001, a total of 40 million people around the world were living with HIV/AIDS, of which 75% were in Sub-Saharan Africa with an estimated 10.8 million being young people aged 15-24 years and an infection rate of 6,000 per day (Human Rights Watch, 2002; UNAIDS, 2003).

Women happen to be mostly affected, with more than 2/3 of newly infected 15-19 year olds in the Sub-Saharan Africa region being female (UNAIDS 2003). In urban areas of Eastern and Southern Africa, epidemiological studies have shown that 17-22% of girls aged 15-19 are already HIV infected, compared with 3-7% of boys of similar age. This gives credence to the UNAIDS assertion that females continue to be “hit 5 to 6 times harder by HIV” than their male counterparts (UNAIDS, 2003; CSO and ORC, 2003b).

The Zambian scenario is similar to that of these Eastern and Southern African countries. With the first AIDS case reported in 1984, HIV/AIDS has since then spread throughout the country and has become a major public health and developmental challenge. In 2002, the HIV prevalence rate for the entire country was 16%, with women more likely to be HIV positive than men (18% versus 13%). Urban areas had a prevalence almost two folds higher than the rural areas (23% vs. 11%). Females aged 15-19 years living in urban areas had a higher prevalence of HIV than those living in rural areas (9% vs. 4.7%).

Sexually Transmitted Infections (STIs), which are found in 5.8% of Zambian girls aged 15-19 years, cause genital inflammation and expose those who have them to a fivefold risk of contracting HIV (CSO and ORC, 2003b).

Based on the Zambia Demographic and Health Survey (ZDHS) held in 2003, HIV prevalence is highest in Lusaka and the Copperbelt Provinces, where approximately one out of every five adults aged 15-49 years is HIV infected (CSO and ORC, 2003b). Eastern Province, with its population of over 1.3 million people, has an HIV prevalence of 16.5% (second last), with Petauke (one of its 8 districts) having a prevalence of 15.8% (GRZ and UNPD, 2002).

This pandemic has resulted in a high and rising death toll, going from 10,600 persons in 1990 to 76,700 in 2000. In 2004, more than 255 Zambians died due to HIV related causes every single day (NAC, 2004).

In response to the HIV/AIDS challenge, the government has, since 1986, developed several strategies addressing prevention, care, support and treatment. The 2002-2005 National AIDS Council (NAC) strategic plan includes nine basic

interventions, of which five deal primarily with preventing sexual transmission of HIV through behavioural change, condom promotion, voluntary counselling and testing, the control of STIs, and programmes to meet the needs of groups practicing high-risk behaviours. The remaining four interventions address the issues of prevention of mother-to-child-transmission, care and support for persons living with HIV/AIDS, antiretroviral therapy, and orphans and vulnerable children (NAC, 2004).

Despite the establishment of youth friendly health services throughout the country and the National AIDS Council's implementation of prevention and care programmes, the prevalence of HIV continues to rise. This continued rise in prevalence could be because the population coverage of the prevention efforts is insufficient, or because the prevention programmes are not effective enough, or because insufficient time has elapsed since their inception for one to observe a decrease in prevalence. Since most of the prevention programmes were devised based on data and insights from urban areas, it is possible that the programmes might be less effective in rural areas. Also since rural areas have fewer resources, the coverage of these programmes in rural areas might be lower than in urban areas.



1.3. SEXUAL BEHAVIOUR AMONGST ZAMBIAN ADOLESCENTS

The onset of sexual activity has become progressively earlier, especially among females in rural areas (FOCUS, 1998), with teenagers becoming sexually active at a median age of 17.5 years. The level of sexual activities among Zambian young adults aged 15 and above is high, 43%, with the proportion of those that have never had sex decreasing sharply with age (CSO and ORC, 2003). By age 18, more than 2/3 of adolescent girls and about 1/2 of the boys have had sexual intercourse (CSO and ORC, 2003b).

Webb (1997) suggests that among boys, sexual activities are mainly motivated by the pleasure they evoke and to keep up with peer pressure, whilst in girls the commonest motivation is the reception of money or gifts from boys or older males (Webb, 1997). Sexual activities among adolescents range from the “normal” vaginal skin-to-skin penetrative heterosexual sexual practice, to oral (25%) and anal sex (10%) (Feldman, 1997). Amongst urban boys 49% used a condom during their last episode of sexual intercourse whilst the corresponding figure was 36% for girls (CSO and ORC, 2002). Condom use with non-cohabiting partners among adolescents fell from 39% in 2000 to 35% in 2003 (NAC, 2004).

Customarily, sex education for both boys and girls is given by grandparents to their grandchildren, over a period of time, during which they incrementally impart sexual knowledge to their grandchildren. The grandmothers talk with their granddaughters while grandfathers talk with their grandsons.

The sexual information they give them is usually not straight forward but indirect. Grandparents teach the boy or the girl using stories and examples, which tell them the things they should or should not do (Rasing, 2003).

This education has changed in the last few decades, due to urbanization and the fact that grandparents are not always in the close neighbourhood of their grandchildren. Despite the fact that female initiation rites remain the main formal institution for sex education of adolescent girls (Rasing, 2003), they appear to get most of their sex education by discussing sexual matters with close friends/cousins of the same sex and peer group (Kalunde, 1997). The rarity of male initiation rites (practiced only in the Western part of Zambia) coupled with the decline in the customary sex education (Rasing, 2003) has resulted in young males turning to friends and the mass media as their main source of information on sexual matters (Fetters, 1997).

1.4. KNOWLEDGE OF HIV AMONGST ZAMBIAN ADOLESCENTS

Despite the fact that 94% of rural Zambian adolescents have heard of HIV/AIDS, their level of knowledge of HIV/AIDS is low, with close to 30% of boys and 32% of girls aged 15-19 years thinking that HIV cannot be avoided (CSO and ORC, 2003b) and 70% of boys and 73% of girls feeling that they had no chance of becoming infected with HIV (CSO and ORC, 2002b).

The general knowledge on HIV prevention is unsatisfactory, especially among adolescent girls. In 2003, 84% of adolescent boys knew that a healthy-looking person can be HIV-infected, with the corresponding figure being 77% amongst the girls. Concerning the use of condoms, 72% of adolescent boys and 67% of girls knew that consistent use of condoms could prevent the spread of HIV/AIDS, while only 74% of girls and 80% of boys believed that having one faithful partner is a way to prevent HIV/AIDS (CSO and ORC, 2002b).

Seventy five percent (75%) of adolescent boys and 74% of girls know that HIV/AIDS can be spread from mother to child (CSO and ORC, 2002b). Twenty two percent (22%) of Zambian adolescent girls believe that HIV could be transmitted by mosquitoes (17% amongst the boys) and 14% by sharing a meal with an infected person (16% amongst the boys). Belief in the transmission of HIV through witchcraft is found in 15% of adolescent boys and 14% of girls (CSO and ORC, 2002b).

Misconceptions about HIV transmission are more common amongst rural residents, compared to their urban counterparts, with 25% of rural males and 28% of rural females harboring misconceptions, compared to 15% of urban males and 18% of urban females (CSO and ORC, 2002b).

1.5. SEXUAL BEHAVIOUR AND KNOWLEDGE OF HIV AMONGST RURAL ZAMBIAN FEMALE ADOLESCENTS

The future of the HIV epidemic in Zambia is influenced by the sexual behaviour of young people and a rise in prevalence is linked to the risk of adolescents encountering an infected partner early on in their sexual life. A rise in HIV prevalence seems likely in rural areas of Zambia since amongst rural adolescent girls sexual activity has become progressively earlier (FOCUS, 1998), with a median age at first sexual intercourse of 17 years and 64% having engaged in sexual intercourse by the age of nineteen (47% in urban areas) (CSO and ORC, 2002b).

According to the 2003 *Zambian Demographic and Health Survey*, condom use during the last act of sexual intercourse is much more common among urban boys (56%) and girls (43%) compared to their rural counterparts, who in only 4% of cases of boys and 8% of girls, had used a condom during their last act of sexual intercourse with a non-regular partner (CSO and ORC, 2003b).

Besides their sexual activity pattern, rural adolescent girls are also at more risk of contracting HIV, because of their unsatisfactory knowledge on HIV transmission and the feeling that they are not vulnerable to being infected. Given the high prevalence of HIV/AIDS within Zambia and the fact that age is associated with HIV prevalence, with the proportion of HIV positive people increasing with age from 5% among those aged 15–19 years to 25% for those aged 30–34 years (CSO and ORC, 2003b), rural adolescent girls are at high risk of HIV infection. Their levels of knowledge contribute to their greater risk of contracting HIV, since by implication, 23% believe that healthy –looking people cannot be HIV infected (7% more compared to rural boys), 33% believe that condoms do not help in preventing HIV infection (5% more compared to rural boys), and 26% believe that having many partners does not put them at greater

risk for contracting HIV (6% more compared to rural boys) (CSO and ORC, 2002b).

1.6. PROBLEM STATEMENT

As shown above there is a high and rising prevalence of HIV amongst adolescents in Zambia. Despite the implementation of national HIV prevention programmes the onset of adolescents sexual activity has continued to be progressively earlier, condom use with non-cohabiting partners has continued to fall and their knowledge of HIV has remained low (NAC, 2004). However almost all the information available on adolescents is derived from data on urban adolescents and it is unclear whether urban adolescents have similar sexual behaviour and HIV knowledge patterns as rural adolescents. Consequently the national HIV prevention programmes which were developed based on urban data, might not be appropriate for rural areas. In order to assess if the prevailing prevention programmes are appropriate for rural adolescents and for adolescent girls in particular, it would be useful if information on the sexual behaviours and knowledge of sexually transmitted infections in general and HIV in particular, were available.

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1.7. PURPOSE

The purpose of this study is to contribute to the bank of information on sexual behaviour and knowledge of sexually transmitted infections amongst rural adolescents. Since this study is a mini-thesis it could not cover all aspects of sexual behaviour and knowledge of HIV, but rather had to be selective. The study therefore focused on adolescents as they are most at risk for contracting HIV and it specifically covered female adolescents only, as they are more at risk than male adolescents. The study was conducted in Petauke District since it is the district in which I live and work, and it is a typical rural district which is representative of most of the rural districts with regard to social, economic and demographic

factors. It is hoped that primarily this study will assist in informing local district policy makers, programme planners, community leaders, educators and guardians, about rural female adolescents' sexual behaviour and knowledge on HIV. It is further hoped that this study will assist to some degree in developing appropriate preventive and promotive strategies within the district, to equip both adolescent males and females with tools for developing positive sexual attitudes and adopting safer sexual behaviours.



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CHAPTER 2: LITERATURE REVIEW

In this chapter, I will discuss literature on the main concepts of this study, which are adolescence, sexual behaviour and knowledge of HIV. Since this study focuses on girls in the adolescent period, the literature review while discussing the effects of the above on both adolescent girls and boys is slanted towards the effects they have on adolescent girls, and where possible specifically addresses the effects on rural adolescent girls.

The literature review first covers adolescence and adolescents' sexuality. It then explores the relationship between gender, culture, power and sexuality. This is followed by a review of current theories of sexual behaviour. The literature review then moves on to cover pertinent aspects of adolescents' sexual behaviour and adolescents' level of knowledge of HIV. Thereafter risky sexual behaviour is discussed and a concluding paragraph to the literature review is provided.

2.1. ADOLESCENCE

Adolescence, which is a transitional period between childhood and adulthood, begins with biological changes associated with puberty and proceeds through a process of psychosocial changes, influenced by cultural factors, which, to a large extent, determine the identity and sexuality of the adolescent (WHO, 2000).

To define their identity, adolescents select characteristics from many people, ranging from peers to influential people, through a process which is full of contradictions. During this period, adolescents spend less time with their parents and more with their friends, they are more interested in the opposite sex and develop the desire for sexual activity. This advent of sexuality, which is characterized by uncertainty, conflict and struggle over appropriate avenues of expressions and the need to manage it, is a major feature of the adolescent experience (WHO, 2000).

Some African societies have very early marriages and little or no education for performing adult roles, hence the period of transition from adolescence to adulthood is either non-existent or very short (Villarreal, 1998), and adolescents are at greater risk for pregnancy and STIs/HIV (Valentine, no date). Most African societies have a structured initiation process during which the child transitions into an adult. During these initiation ceremonies, sexuality and socio-culturally acceptable sexual behaviour is explained to the initiated (Lemba, 1996 in Kapungwe, 2003).

Among the Nsenga of the Eastern province of Zambia, where this study was conducted, the initiation of the girl usually starts when her breasts become enlarged and it is usually conducted by the grandmother or an elderly female family member. When the girl experiences her first menses, she reports it to her mother or an elderly female family member. The girl is then traditionally secluded for a period of at least 2 weeks. During this period she is not only instructed on the mechanics of sexual intercourse and acceptable sexual behaviour, but also on how to raise a family and how to behave towards her elders (Smith, 1962, in Kapungwe, 2003).

The girl is also taught various other issues related to gender roles including personal hygiene especially during menstruation; respect for her future husband expressed by being faithful, obedient and submissive to him and by learning how to look after him; and finally by learning how to look after her future in-laws (Kapungwe, 2003).

These initiation ceremonies, especially in the rural areas, serve as an entry point for adolescent girls into the world of sexuality.

2.2. ADOLESCENTS' SEXUALITY

Sexuality, which can influence thoughts, feelings, interactions and actions among beings, and motivate people to find love, contact, warmth and intimacy, is expressed in many different ways and is closely linked to the environment one finds oneself in (Rwenge, 2000). An understanding of gender, sex and sexuality is

essential to addressing issues of sexual behaviour, yet the three terms are often confused and interchanged. Hilary, 2002 gives us some clarification on these terms:

Sex refers to the sum of biological characteristics that define the spectrum of humans as females and males and Gender is the sum of cultural values, attitudes, roles, practices and characteristics based on sex.

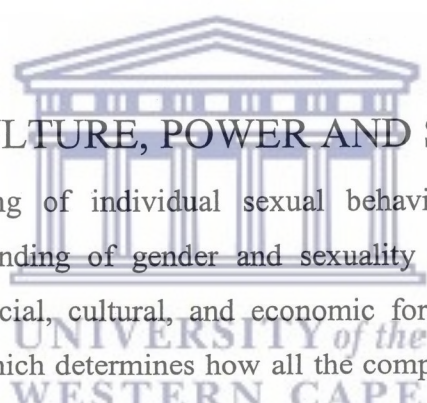
Sexuality refers to a core dimension of being human which includes sex, gender, sexual and gender identity, sexual orientation, eroticism, emotional attachment/love, and reproduction. It is experienced or expressed in thoughts, fantasies, desires, beliefs, attitudes, values, activities, practices, roles, and relationships. Sexuality is a result of the interplay of biological, psychological, socio-economic, cultural, ethical and religious/spiritual factors (Hilary, 2002).

Gender is instrumental in defining human sexuality for both women and men and gender relations are an essential component of the socio-cultural fabric of a society. From the earliest age, socio-cultural norms dictate that boys and girls adopt specific ideals of masculinity and femininity, which will later have an impact on their sexual behaviour, their respective sexual responsibilities, their sexual education, and ability to access information about sex and on their ability to access resources, including sexual health care (Hilary, 2002). In this context, adolescents' sexuality will be defined by whom they have sex with, in what ways, why, under what circumstances, and with what outcomes (Gupta, 2000; Gupta, 2000b).

Practices, partners, pleasure, social and economic pressure, pain, power relations and procreation constitute the main components of sexuality, whose expression and experience are determined by the power underlying them. While adolescent boys' sexual activity, considered as natural, appears to be driven by the desire to experience unprotected penetrative sexual intercourse in order to prove their manhood and to be like other men, adolescent girls on their side have sex to express or prove love, to strengthen relationships, and have a marriage partner (Priscilla, 2002). Because the man's pleasure is at the center, girls are taught

during traditional initiation ceremonies ways in which they can please their men and provide them with more pleasurable sex.

These motives, be it for male or female adolescents, are dictated by the norms prevailing in the adolescents' circles. All would want to do what others do so as to feel a sense of belonging to their circle of friends (Pettifor, 2004; Priscilla, 2002). This sexual pressure is mostly expressed as forced/coerced sex from a male partner, or from peers, particularly for the first sexual intercourse (Luke, 2003; Priscilla, 2002). The degree of expression of the pressure depends on the partner's power in the sexual relationship. This is a relative ability of one partner to act independently, to dominate decision making, to engage in behavior against a partner's wishes, or to control a partner's actions (Pulerwitz, 2000 cited by Blanc, 2001).



2.3. GENDER, CULTURE, POWER AND SEXUALITY

The understanding of individual sexual behaviour, male or female, necessitates an understanding of gender and sexuality as constructed by the complex interplay of social, cultural, and economic forces that determine the distribution of power, which determines how all the components of sexuality are expressed, experienced and whose pleasure and needs is given priority and when, how, and with whom sex takes place (Gupta, 2000). The imbalance in power in the boy-girl relationships, which are gender/power relations, coupled with socio-cultural and economic factors, frequently curtail the women's sexual autonomy, expand males' sexual freedom, and thereby increase women's/girls' and men's risk and vulnerability to STIs/HIV (Gupta, 2000).

In the socio-cultural African context, women/girls are expected to be passive in sexual interaction and observe silence on issues pertaining to sex. This has made it difficult for them to be informed about risk reduction or, even when informed, makes it difficult for them to be proactive in negotiating safer sex (Gupta, 2000).

For girls who have to keep their virginity, especially in societies where there is a bride price, their risk of infection is even high because on the one hand, virginity restricts their ability to ask for information about sex, out of fear that they will be thought to be sexually active (Gupta, 2000) and on the other hand the innocence and passivity associated with virginity makes them easy prey for older men, who may pursue or coerce them into sex, or they may practice anal sex that preserves their virginity, while putting them at increased risk of infection (Blanc, 2001).

Among those who are sexually active, some engage in other practices such as the use of vaginal drying agents, to satisfy a culture which puts much emphasis on male pleasure in sexual interactions (Blanc, 2001).

The women's economic dependence on men reinforces their vulnerability to STI/HIV infection, by increasing the likelihood that they will exchange sex for money or favours, and by lowering the likelihood of them succeeding in negotiating protection and/or leaving a relationship that they perceive to be risky (Blanc, 2001; Dijk, 2002; Gupta, 2000; Martlin and Spence, 2001; Sokoni, 1998; Walsh, 2001).

The worsening economic opportunities in recent decades have made adolescents' guardians less able to care for them (Rwenge, 2000) and have transformed the adolescents' sexuality into a valuable resource that can be exchanged for money, gifts, and other assistance (Luke, 2003).

As opposed to women, whose vulnerability derives from a lower power, men's vulnerability to HIV infection is caused by their greater power, mainly explained by the prevailing sexual script of male sexuality, which is often defined as natural, impulsive and initiatory, and expected to be more active and in control. This puts young men, at risk of infection because they are prevented from seeking information or admitting their lack of knowledge about sex or protection, and coerces them into experimenting with sex, at a young age, in unsafe ways and with multiple partners, to prove their manhood (Dijk, 2002; UNAIDS, 1999).

This complex interplay of social, cultural, and economic forces determine the distribution of power among adolescents, whose sexual behaviour is better

understood when examined through the lens of a set of theories developed through the ages.

2.4. THEORIES ON SEXUAL BEHAVIOUR

The reason why people have sexual intercourse, and the meanings ascribed to this behaviour are diverse, and fluid within individuals and relationships.

To comprehend the sexual behaviour of adolescent boys/girls, an understanding of the different models of sexual behaviour and the various intrinsic and extrinsic factors that impact on it need to be examined (UNESCO/UNAIDS, 2000). Below are described some of the most common theories on adolescents' sexual behaviour.

2.4.1 Psychological models of behaviour

This model suggests that adolescents act based on their knowledge of a particular problem, and of a potential behavioural "solution" to the identified problem. Behavioural intention is seen as a product of the adolescent's attitude towards the behaviour, perceived subjective norms, and self efficacy in performing a particular behaviour. In the presence of these predictors of sexual behaviour, behavioural intention is highly predictive of actual behaviour if the adolescent has the necessary skills to perform the behaviour, and in the absence of any environmental constraints (Hargreaves, 2002).

2.4.2 Social theories

These theories highlight the ways in which communities adopt behaviours, taking the emphasis away from solely individual determinants of behaviour.

These theories point to the fact that the peer group one identifies with has a significant impact on one's sexual behaviour. Diffusion of innovation theory and social influence theory describe the fact that adolescents are likely to adopt new behaviours if they see people around them adopting them, in particular parents, opinion leaders and friends. The social network theory points specifically to the

fact that by definition, sexual relationships involve more than one person, pointing to another layer of factors, including gender and power that can affect adolescents' sexual behaviours (UNAIDS, 1999 in Hargreaves, 2002).

2.4.3 Structural and environmental theories

According to these theories, individual and social factors may explain some patterns, but cannot explain all the variations in behaviour. Public policy and community level factors that affect the environment in which adolescents make decisions about sexual behaviour can be more or less supportive of certain types of behaviour they exhibit.

Socio-economic factors within the society have also been identified as having an important bearing on facilitating certain types of protective or risk-related behaviours among adolescents. They may affect the opportunity for, timing of and patterns of behaviours, such as sexual, social, health seeking, or recreational behaviours that can impact on the risk of HIV infection (Macphail, 2000 in Hargreaves, 2002).

The combination of these theories explains the human sexual behaviour and helps understand the why and how of the adolescent boys and girls' sexual behaviour.

2.5. ADOLESCENTS' SEXUAL BEHAVIOUR

The fight against HIV/AIDS, while in its infancy, concentrated more on theories that focused on individuals and individual behavioural change. This approach failed to slow down the HIV/AIDS epidemic, because it ignored the relationship of behaviour with social, cultural and economic factors and their interactions in shaping people's sexual behaviour.

The study of adolescents' sexual behaviour has not been that easy. Literature on adolescent sexuality is dominated by survey approaches, mostly based on the KAP -model (Knowledge, Attitudes and Practices) of sexual behaviour, which only count sexual acts, without taking the sexual meanings and

motivations into account. In short, most studies on adolescent sexual behaviour has not been considering the context in which knowledge on HIV/AIDS/STIs and sexuality is gained and sexuality negotiated (MacPhail, 2001 in Dijk, 2002).

The knowledge acquired through the KAP-model studies on adolescent sexuality has paved the way to a more recent approach of sexuality, which is considered as a result of the interplay of biological, psychological, socio-economic, cultural, ethical and religious/spiritual factors (Hilary, 2002).

Social and cultural factors influence adolescents' knowledge, attitudes and behaviour and ultimately, HIV-risk, while the cognitive ones include adolescent boys and girls' knowledge and beliefs regarding sex and sexuality, HIV-risk and risk-taking. It includes their ability to identify risk and understand information about risk-reduction.

Attitudinal factors, which are linked to the adolescents' evaluation of situations, of themselves and others, include feelings about HIV and AIDS, attitudes towards those infected, views about the culpability of social groups, and attitudes about gender and sexuality.

Concerning the behavioural factors, they include practices, behaviours and skills that are related to HIV-risk taking and risk-reduction. Behavioural factors are thus also skills that are needed to use condoms correctly and skills to negotiate their use with a sexual partner.

Gender, an essential component of the socio-cultural fabric of a society, is instrumental in defining adolescents' sexuality for both female and male adolescents. Gender influences the differences between boys and girls in terms of what they know (cognitive factors), what they believe (attitudinal factors), and how they behave (behavioural factors).

Besides this individual risk, the society in which the adolescents evolve can limit their choices and options for risk-reduction, through discrimination and marginalization of certain groups of adolescents, illiteracy and lack of educational opportunity, poverty, lack of work or economic opportunities, laws, political will to mount effective responses to the epidemic, and the state's willingness to protect and promote political, economic and social human rights (Dijk, 2002).

Surveys have shown that, adolescents do not always use condoms during their sexual encounters. The age of the male partner and the length of the partnership have been significantly related to condom use. While older men and longer duration of relationships decrease the use of condoms, partner's income is positively associated with it (Luke, 2003).

For adolescents who postpone their coitarche, background factors such as living together with both natural parents, higher socioeconomic status (Edgardh, 2000), participating in sports, helping at home (indicative of a connected relationship to the family) and speaking with their mothers or relying on them for information (Chirinos, 2000) have been positively associated with late coitarche.

On the other hand, living with a single parent within a mixed or polygamous family (Slap, 2003), talking about sexuality with peers of both sexes, carrying out activities such as going to parties, seeing friends, watching pornographic videos, reading pornographic magazines, and use of tobacco, alcohol and drugs, were found to be associated with being sexually active (Chirinos, 2000).

In Zambia, among adolescents aged 15–19, 28% of boys and 44% of girls have had sex, with a median age at first sex of 17 for girls and 17.5 for boys. Among the adolescent girls who had ever had sex, 59% had ever given birth or were pregnant, of which 64% live in rural areas and 47% in urban areas (CSO and ORC, 2002b).

In the lines below, I highlight the findings from the Zambia Sexual Behaviour Survey of 2003, which focuses on four of the five UNAIDS sexual behaviour indicators for adolescents, both boys and girls, that influence the future of the HIV epidemic (CSO and ORC, 2002b).

The sexual behaviour "Indicator 2", which is the percent of single people aged 15–24 who have had sex in the previous 12 months as a percentage of all young people surveyed shows that, 33% of boys and 28% of girls had sex in the preceding year. Among both adolescent boys and girls, pre-marital sex was much more common in rural areas than in urban areas.

In regards to "Indicator 3" which is condom use, only 56% of boys and 43% of girls used condoms during their last sexual acts. It use was much more common among urban adolescents compared to the rural ones.

The "Indicator 4", the percent of young people who have had sex with more than one partner in the previous 12 months, among all young people surveyed, showed an overall 8.5% of adolescent boys reporting having had multiple partners in the past year against 2.7% of girls.

The Young People's Sexual Behaviour "Indicator 5", the percent of young people who had sex in the previous year and used a condom at last sex with a non-regular partner, showed that 17% of young urban boys and 9.6% of young rural boys had used a condom at last sex with a non-regular partner. Among young girls, 7.8% and 4.4% had used a condom at last sex with a non-regular partner in urban and rural areas, respectively.



2.6. ADOLESCENTS' KNOWLEDGE OF HIV

Knowledge of HIV and risk reduction is a key factor in the ability of an individual to be protected from HIV infection. As already highlighted, in most societies, gender norms influence how and what men and women are expected to know about sexual matters. Women and girls are often poorly informed and men are generally expected to know much more about sex (Dijk, 2002).

Globally, more than 80% of young women do not have 'sufficient' knowledge about HIV/AIDS. Many have no idea how HIV is transmitted and know little or have no information about protection methods (UNAIDS, 2003).

Surveys have shown that fewer girls than boys aged 15 to 19 have basic knowledge about how to protect themselves from HIV/AIDS and many misconceptions that can lead to the creation of myths, harmful to girls, are common in areas with limited access to accurate information (UNDPI, 2004).

In Zambia, where the HIV/AIDS prevention programmes targeting adolescents, focus and direct their messages at the three important aspects of behaviour, namely abstinence or delaying sexual debut, limiting the number of

partners/staying faithful to one partner, and consistent condom use, almost all adolescents have heard of AIDS (99% in the urban area and 94% in the rural area) (CSO and ORC, 2003b). However, close to 30% of boys and 32% of girls aged 15-19 years whose levels of knowledge are lower compared to the 20-24 year olds, think that HIV cannot be avoided (CSO and ORC, 2003b).

Only seventy seven percent of adolescent girls (compared to 84% of boys) know that a healthy person can have HIV/AIDS (CSO and ORC, 2002b).

The 2003 sexual behaviour survey (CSO and ORC, 2002b) shows that 72% of adolescent boys and 67% of adolescent girls know that consistent use of condoms could prevent the spread of HIV/AIDS while 80% of adolescent boys and 74% of adolescent girls believe that having one faithful partner is a way to prevent HIV/AIDS (CSO and ORC, 2002b). The knowledge of Mother to Child Transmission is fairly high among adolescents, with 75% of boys and 74% of girls knowing that HIV/AIDS could be spread from mother to child (CSO and ORC, 2002b).

Misconceptions about HIV transmission, such as transmission via mosquitoes, witchcraft, or sharing a meal with an infected person, are commonly found among rural adolescents (CSO and ORC, 2003b). Concerning the transmission of HIV by mosquitoes, 17% of boys and 22% of girls believed that mosquitoes transmit HIV. Misconceptions about HIV transmission through sharing a meal with an infected person are also present among the adolescents, with 16% of adolescent boys and 14% of adolescent girls thinking that HIV can be transmitted by sharing a meal (CSO and ORC, 2002b). Fifteen percent of adolescent boys and 14% of adolescent girls believed that HIV could be transmitted by witchcraft.

Zambian adolescents are more likely than older people to think that they have no chance of getting the AIDS virus. Close to three-fourths of adolescent boys (70%) feel that they had no chance of becoming infected with HIV, compared to around half (53%) of males aged 20-24 years, and 49% of males aged 25-59 years. Similarly, 73% of adolescent girls say that they have no chance

of getting AIDS, compared to 55% of females aged 20–24 years, and 47% of females aged 25–49 years.

Studies conducted by Fetters (1997) in urban areas have revealed that parents are not the main source of sexual and reproductive health information for adolescents. Grandmothers and other female relatives feature strongly as an information source for girls, while friends and media are more likely to influence boys.

The gap existing between the awareness raised by education programmes and the practice of safe sex may be explained by the mixed messages sent by society. There is a great need to directly challenge the micro and macro structures which support and nourish the contemporary high-risk sexual context, and to change attitudes and beliefs about sexuality and gender relations in general, in order to effect beneficial change (Ingwersen, 2001; Madlala, 2002; Ndubani and Hojer, 2001).



2.7. RISKY SEXUAL BEHAVIOUR

Risk taking behaviour is part and parcel of adolescence, and experimentation is part of their way of exploring reality. WHO defines a risky sexual behaviour as

one that increases the likelihood of adverse sexual and reproductive health consequences such as unwanted pregnancies, unsafe abortion, HIV/AIDS and STIs and includes sexual activity under the influence of substances, sexual intercourse with drug users, unprotected sexual intercourse, commercial sex and unprotected sex with a same sex partner (WHO, 2000).

Among the factors predisposing adolescents to risky practices, studies have highlighted the role of deprivation at an early age, emotional closeness seeking through sexual activity and even actively seeking parenthood (Edgardh, 2000). In Sub-Saharan Africa, urbanization, with its attendant social and cultural disrupts, has been identified as the main cause of risky practices among urban young men (Ndubani and Hojer, 2001).

On the other hand, adolescents' own self-efficacy, youth friendly services and a supportive environment have been identified as underlying protective factors (Mehra, 2002).

Whether one is in a relationship and the type of partnership one has may have implications for exposure to risk of contracting HIV/AIDS/STIs, especially in the context of unprotected sex and a higher numbers of partners.

Even though adolescent girls actively involve themselves in heterosexual relationship with a variety of partners ranging from classmates and neighbourhood youth to relatives and "sugar daddies" as regular (boyfriend) (71%) or non-regular partners, boys tend to have multiple partners (FOCUS, 1998; CSO and ORC , 2003b). Among boys aged 15-19, 12% had 2 or more partners in the last 12 months compared to 2.9% among the girls. Urban adolescent boys (15%) are much more likely to have multiple partners than rural ones (8%) and differences among urban and rural adolescent girls are not notable (CSO and ORC, 2002). In 3.1% of cases girls are found to be involved in a relationship with partners who are at least 10 years older than themselves (CSO and ORC, 2002).

When started at an early age, risky sexual behaviour tends to cover several domains, and may, together with health hazards such as smoking and drug experimentation, adversely affect the health of adolescents (Edgardh, 2000).

The prevalence of risky sexual behaviour amongst adolescents is being fuelled by the Western media which promotes a message of liberation, self-development, and marginality from traditional ways of life. Unfortunately, these messages implicitly or explicitly encourage sexual freedom without putting much weight on responsibility for sexual behaviour (Chirinos, 2000; Indralal De Silva, 1998; Priscilla, 2002)

2.8. CONCLUSION

In conclusion, adolescence, a period marked by biological and psychosocial changes, is characterized by a struggle for the appropriate expression of sexuality, which is determined by gender and power relations, emanating from socio-cultural norms and determining the when, how, with whom and why of sexuality.

The behavioural aspect of sexuality among adolescent is characterized by a diversity of sexual practices with a wide range of sexual partners, increasing the degree of exposure to STIs/HIV/AIDS. Underlying sexual motives, which find their roots in the socio-cultural and economic fabric of the society, differ between boys and girls, and their sexual behaviour can be partially understood using a set of theories, based on intrinsic and extrinsic factors.

Besides these factors, the distribution of power, which is imbalanced in adolescents' relationships, increases the girls' and boys' risk and vulnerability to STIs/HIV, affects the negotiation of safe sex and affects the level of knowledge about HIV transmission and prevention.



CHAPTER 3: AIM AND OBJECTIVES

3.1. STUDY AIM

To assess the sexual behaviour and the level of knowledge on HIV, of adolescent schoolgirls, as well as to determine the association of selected demographic and socio-economic factors with risky sexual behaviour.

3.2. OBJECTIVES

The objectives of this research were:

1. To assess the views on sexual behaviour and the variety of sexual behaviours exhibited by adolescent schoolgirls.
2. To determine the level of knowledge regarding HIV/AIDS amongst adolescent schoolgirls.
3. To investigate the socio-demographic factors that may influence adolescent schoolgirls' sexual behaviour and level of knowledge on HIV.
4. To investigate the socio-economic factors that may influence adolescent schoolgirls' sexual behaviour and level of knowledge on HIV.

CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

4.1. INTRODUCTION

In this chapter, I will start by discussing the study design and the definition of the main terms used.

Then I will deal with the study population, the selection of participants and the methods used in data collection.

Finally I will discuss the data analysis and strengths and weaknesses of the method used.

4.2. STUDY DESIGN

This was a cross sectional descriptive survey of adolescent schoolgirls. Detailed information on the knowledge of HIV/AIDS and sexual behaviour patterns was elicited from a representative sample of the Petauke high schools' female population. Also, information on some socio-demographic and socio-economic factors that could provide a possible explanation of the schoolgirls' sexual behaviour values was obtained.

This study design, which is cheap, was adopted because it provides an efficient and rapid way of mapping out dominant sexual behaviour among the schoolgirls. Its main limitation is the possibility of recall bias as well as incorrect statements on age at first sexual contact, the number of sexual partners, the age of the sexual partner, and other sensitive information.

4.3. DEFINITION OF TERMS

In this section, I define the key terms used in this study.

- *Adolescent*: young people aged 15 – 19 years;
- *Schoolgirl*: a girl who studies full-time in a high-school;
- *Ever had sex*: adolescent who reported ever having had penetrative vaginal or anal sex, at least once in their lifetime.
- *Never had sex*: adolescent who reported never having had penetrative vaginal or anal sex in their lifetime.
- *Risky sexual behaviour*: behaviour that increases the likelihood of adverse health consequences, namely: non use of condoms, dry sex, anal sex, onset of sexual intercourse at an early age, and having multiple sexual partners.
- *Boyfriend*: a male with whom the schoolgirl had a loving friendship



4.4. STUDY POPULATION

The total population of this study was all adolescent girls aged 15 to 19 years who were enrolled at the 9 secondary (high) schools in Petatuke district. This amounted to 2,531 schoolgirls. Unfortunately the selection of adolescent schoolgirls rather than all adolescent girls means that the results will not be representative of adolescent girls who are not at school. Only 20% of adolescent girls attain secondary education (JICA, 1998) therefore the exclusion of adolescents not enrolled at secondary schools is an important limitation, but it was unavoidable, since this is a mini-thesis and therefore it was not possible to broaden the scope to include all female adolescents in the study population.

4.5. SAMPLE SIZE

From a total population of 2,531 high school girls in Petauke district, with a confidence level fixed at 95%, a presumed prevalence of sexual activity of 30%, a worst acceptable prevalence of between 26% and 34% and using the Epi Info 2003 version 3.01 programme, I calculated that a sample size of 420 schoolgirls was required

4.6. SAMPLING PROCEDURE

To ensure that all schools were given a fair chance of selection, a multistage sampling method was adopted, whereby sampling was done in two stages.

In the first stage, 3 schools were randomly selected from the total of 9 schools. It was logistically much easier for data collection and deemed permissible to use a sample of 3 schools, as the 9 schools had similar student characteristics. The second stage involved the systematic selection of respondents based on probabilities proportionate to the size of the schools and grades. Hence, from each of the 3 selected schools, a proportional number of respondents were selected using systematic sampling in each grade of each selected school.

The sampling frame for the three schools, which had a total of 844 schoolgirls, was established using schools registers. This second stage population was divided by 420 (the sample size) to establish the sampling interval, of two. Every second schoolgirl in each grade on the schoolgirls' grade lists, in the selected schools, was selected and included in the sample. The starting point for each grade at every school was obtained randomly by dropping a pen on the list.

Therefore, from a total population of approximately 2,531 Petauke schoolgirls, 420 respondents were selected in direct proportion to the number of schoolgirls in each of the 3 randomly chosen schools. This proportional systematic sampling of schoolgirls by grade and school prevented sampling bias. The replacement of the pre-selected schoolgirls who did not attend school on the day of the survey, was planned to be done by randomly selecting other schoolgirls

from amongst those in the sample frame who had attended school on that day and who were not pre-selected. If anyone refused to participate in the survey they would not be replaced.

4.7. DATA COLLECTION

The data collection was run after the University of the Western Cape's Research and Ethics committee had approved the research proposal and after the principals of the selected schools had granted permission to conduct research in their respective establishments. An anonymous, pre-tested, structured and self-administered questionnaire was completed by the schoolgirls, after obtaining the written informed consent of the schools administrators, who represented the minors' parents, and the written informed consent of each of the schoolgirls.

The questionnaire, which was an adaptation of the ones used in the national Zambian Sexual Behaviour Survey (CSO and ORC, 2002b), the 2003 Zambia Demographic and Health Survey (CSO and ORC, 2003b), and the guide on Youth Sexual and Reproductive Health Operational Research for Baseline and Evaluation (Goergen, 2000), took approximately one hour to be completed. The questionnaire used questions from each of the above surveys, but some of the questions used had to be adapted in order to properly fit in with the specific objectives of this mini-thesis.

The questionnaire consisted of the following sections: 1) Socio-demographic information, 2) Family characteristics, 3) Knowledge and attitudes regarding sexuality and HIV/AIDS and 4) Sexual experience (see attached questionnaire). The questionnaire was written and presented in English, although some colloquial English terms and expressions were used where deemed appropriate.

The study variables were:

- **Socio-demographic information:** age, tribe, religion;

- **Socio-economic information: main breadwinner “keeper” in the household, “keeper’s” profession;**
- **Knowledge and attitudes regarding sexuality and HIV/AIDS:**
Attitudes: keeping of virginity, use of condom, partner preference;
Knowledge: HIV prevention, HIV transmission;
Hypothetical situations: perception of risk of contracting HIV infection;
Information: source of information on sexuality, participation in an initiation ceremony;
- **Sexual activity:** having a boyfriend, age at first episode of sexual intercourse, first sexual partner, reason for initiating sexual activity, number of sexual encounters in the last 4 weeks, number of life sexual encounters, last sex partner, past sexual practices, use of a condom during the last episode of sexual intercourse and the place of the last episode of sexual intercourse.

In each of the schools the questionnaire was administered to individual grades of schoolgirls. The schoolgirls of each grade who were selected for the study were asked to enter the school hall and were seated one per desk, with the desks set far enough apart to guarantee privacy when responding to the questions. Before commencing the survey, I gave a brief explanation of the purpose of the study to the adolescent schoolgirls. The research assistant then distributed the questionnaire.

I read out and explained the questions one by one (a Nyanja translation of difficult terms was done by the female research assistant) and I asked the schoolgirls to immediately answer the question that had been read out. I hoped in this way to avoid incomplete answering of the question. It was possible to administer an English questionnaire as all the schoolgirls were being taught in English. The Nyanja translation, done by the female research assistant for difficult terms only, was in fact seldom required, with only 5 terms requiring translation.

The terms which had to be translated were: sexual intercourse, initiation ceremony, anal sex, giving oral sex and receiving oral sex.

4.8. PILOT STUDY

Prior to the administration of the questionnaire in the selected schools, a pilot study was conducted at Nyanje high school, situated in Petauke district. A total of 20 adolescent schoolgirls, aged 15 to 19 years answered the questionnaire. The pilot study allowed me to identify a major shortfall in the way questions 16 to 23 were formulated. In the initial version, the survey for schoolgirls who never had sex ended at question 15, and they could watch those who had ever had sex continue answering up to question 23. The way questions 16 to 23 were formulated breached confidentiality, in the sense that it became obvious to schoolgirls that those who went on completing the questionnaire up to the last question were sexually active.

The piloting allowed me to correct questions 16 to 23, by adding the component "Never had sex" on each on them, hence allowing schoolgirls who had never had sex and those who had ever had sex, to answer all questions up to the last one.

The pilot study demonstrated that the colloquial terms used in the questionnaire were clearly understood by the adolescents and none of the questions were misinterpreted.

4.9. DATA ANALYSIS

After accuracy checks of the data, I analyzed it using Epi Info 2003 version 3.01 database. After coding the data, it was put in two different Excel spreadsheets, one for the total sample and the other for the sexually active schoolgirls. This separation of spreadsheets was done to facilitate the calculation of frequencies and associations between the selected variables, for the two groups.

Using "Analysis" in Epi Info 2003 version 3.01, spreadsheets data were imported from Excel to Epi Info and analyzed. The calculations of the frequencies were done using the analysis command "frequency" and that of the prevalence ratios were done using the "table" analysis command.

Frequencies were calculated for all the data variables measured. Prevalence ratios of the independent and dependent variables were calculated and the statistical significance of their association was assessed using 95% confidence intervals. The following independent variables, deriving from the demographic and socio-economic background of the schoolgirls and which might logically have a causal association, were selected: the schoolgirls' age, participation in an initiation ceremony, the guardian of the schoolgirls and their profession. The dependent variables were selected from amongst the sexual behaviours portrayed by the schoolgirls and their knowledge of HIV, namely: relationships, sexual activity, age at sexual debut, lifetime sexual partners, condom use, sexual practices, knowledge on HIV transmission and prevention. The selection of these variables is justified by the fact that they increase the adolescent schoolgirls' vulnerability to STIs and HIV.

Composite measures of knowledge about HIV transmission and prevention were calculated as follows:

- Knowledge about HIV Transmission:

Very high knowledge: 9 or 10 correct responses

High knowledge: 7 or 8 correct responses

Medium knowledge: 5 or 6 correct responses

Low knowledge: 4 or less correct responses

The following were the correct answers in relation to the question on knowledge of HIV transmission (question 6): 1, 2, 3, 8, and 9. If participants "ticked" any of these boxes they were judged to have provided a correct response. If they left the box "blank" they were judged to have provided an incorrect response.

The following were the incorrect answers in relation to the question on knowledge of HIV transmission (question 6): 4, 5, 6,7,10. . If participants did **not** "tick" any

of these boxes (i.e. they left the boxes “blank”) they were judged to have provided a correct response. If they “ticked” the box they were judged to have provided an incorrect response.

- *Knowledge about HIV Prevention:*

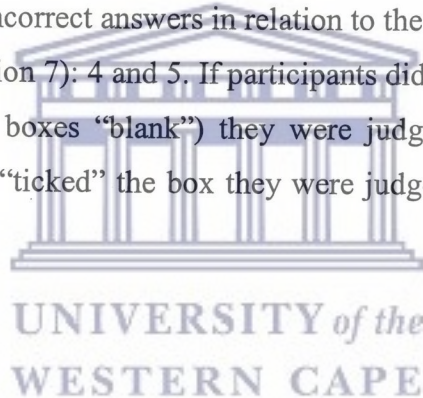
High knowledge: 5 correct responses

Medium knowledge: 3 or 4 correct responses

Low knowledge: 2 or less correct response.

The following were the correct answers in relation to the question on knowledge of HIV prevention (question 7): 1, 2 and 3. If participants “ticked” any of these boxes they were judged to have provided a correct response. If they left the box “blank” they were judged to have provided an incorrect response.

The following were the incorrect answers in relation to the question on knowledge of HIV prevention (question 7): 4 and 5. If participants did **not** “tick” any of these boxes (i.e. they left the boxes “blank”) they were judged to have provided a correct response. If they “ticked” the box they were judged to have provided an incorrect response.



4.10. VALIDITY

To enhance the likelihood that schoolgirls filling in the questionnaire gave a true account, I ensured:

- *Anonymity*: they did not put their names on the questionnaire, and the questionnaire was group-administered;
- *Discretion*: apart from the schoolgirls and the researchers, there were no other people in the classroom. The schoolgirls sat on desks chairs far enough apart, such that they did not see each others answers;

- *Non- judgmental locally appropriate wording* of questions using colloquial easily understood English.

In addition, the sample size was sufficiently large and the proportionally stratified random sampling prevented selection bias.

4.11. RELIABILITY

Some degree of reliability was assessed through the internal consistency of the questionnaire responses, where responses to questions asked in one part of an individual questionnaire were checked for logical agreement with related questions. However, due to time, logistical and financial constraints, no further assessment of reliability was done.

4.12. GENERALISABILITY

Since the sample of this study was representative of the adolescent schoolgirls from which it was collected, and the method used can be repeated (standardized questionnaire), this study can probably be generalized to adolescent girls schooling in similar rural areas in Zambia.

4.13. ETHICS

The research proposal was granted ethical approval by the University of the Western Cape's Research and Ethics committee and permission to conduct the research amongst schoolgirls was granted by the principal of each of the three schools. Considering the sensitivity of this research, which tried to open a window on the private life of adolescent schoolgirls, I made sure that the basic principles of human research ethics (respect of persons, beneficence, non-malevolence, voluntary participation, confidentiality and justice) were respected.

- *Benefit*: this research, which may be suspected of "voyeurism motives," will be of a great benefit to the adolescent schoolgirls of Petauke and Zambia, as recommendations on appropriate interventions for rural areas will be made to Health and Education Ministries;

- *Do no harm*: Participation in this study did not result in any harm to the participants. Declining to participate in the study did not result in any harm to those declining to participate.
- *Voluntary participation*: Participation in the study was voluntary and participants were given an option to answer only the questions they felt comfortable with. Although they could have withdrawn from the study at any time this was practically difficult as the other schoolgirls would see them leaving. Those wishing to withdraw were therefore instructed to simply not answer any further questions but to remain in their seat until the end. In this way, they could withdraw anonymously;
- *Confidentiality*: the use of anonymous self-administered closed questions guaranteed the respect of privacy;
- *Ownership of information*: Feed-back was given to the schools. While this ensured important knowledge transfer, it was primarily done in order to respect the participants' right to obtain information on the outcome of the study.

4.14. LIMITATIONS OF THE STUDY

A number of limitations of the study may be identified, including the study design. In this research on adolescents' sexual behaviour, the scope of methods available was limited by the very nature of the topic. Although a cross sectional study design adopted was the simplest and quickest method of enquiry, it was not the most valid.

That the questionnaire used in this study, was designed by a student who is not an experienced researcher, is an important limitation of the study, since it may contain formulaic and terminological shortfalls and possibly frank errors.

The investigation of socio-economic factors could have contained more questions such as the type of housing, household income and household assets, but these were omitted because they are quite difficult to validly measure amongst communities with a high level of homogeneity for them.

The closed questions used in the questionnaire to obtain self reports of behaviour posed a key problem of validity: were the adolescent schoolgirls surveyed telling the truth on the most private part of their lives, did they understand the questions and were the options provided applicable to them and did they allow them to adequately answer the questions? It is hoped that they were, but clearly uncertainty as to whether they were is inherent in the study.

Given the sensitivity of the subject being researched, the presence of a male researcher may have been intimidating for the schoolgirls. However the presence of a male researcher has a low likelihood of having affected the validity of the study, as the participants were anonymously completing a standardized questionnaire with mainly closed questions and the male was only there to explain the questions. However there would have been some effect on validity as the participants may have been embarrassed or shy about requesting the male researcher to clarify any questions they did not fully understand.

The study was done on schoolgirls and it therefore is not representative of adolescent girls who do not attend secondary school, as they might be quite different in many respects to those adolescent girls who do attend secondary school. . This is an important limitation as it should be noted that the majority of adolescent girls would not be at school, as only 20% of adolescent girls receive higher-secondary education. Ideally adolescents not at school should have been included, but the time and resources available for doing this mini-thesis did not allow for this.

As this study is cross sectional in nature, it has a lower ability to determine causality of any associations found.

Other limitations in this study include the possibility of recall bias or incorrect statements on age at first sexual intercourse, the number of sexual partners, the age of the sexual partner, and other sensitive information.

The replacement of the pre-selected schoolgirls who did not attend school on the day of the survey (9 in total) may have caused a very small selection bias, because the absent schoolgirls may have been different from those who had replaced them.

CHAPTER 5: RESULTS

The chapter is subdivided into seven sections, namely the sample realization, the demographic indicators, the levels of sexual activity, the descriptors of sexual activity, the HIV knowledge, the perceived risk of contracting HIV and sources of sexual information, the general sexual opinions and finally some measures of association.

In the first section I will present and describe the sample realization.

In the second section, I will show the frequency distribution of the schoolgirls' socio-demographic and socio-economic characteristics.

In the third section, I will look at the schoolgirls' relationships status, their sexual experience, age at first sex, their main reasons for engaging in sexual activity and the frequency of sexual activity in the last 4 weeks.

In the fourth section, the key descriptors of sexual activity such as sexual partners, types of sexual practices, condom use and place of the last episode of sexual intercourse will be highlighted.

In the fifth section, I will elaborate on the schoolgirls' HIV knowledge, their perceived risk of contracting HIV and their main sources of sexual information.

In the sixth section, the schoolgirls' opinions regarding various sexual activities will be described.

In the seventh and last section the association between selected dependent and independent variables will be shown.

5.1. SAMPLE REALISATION

The survey included 420 (17%) of the 2,531 schoolgirls registered in 2004, in Petauke high schools. The response rate of Petauke adolescent schoolgirls who participated in the survey was 100%. Nine of the schoolgirls amongst the 420 girls of the initial sample had to be replaced, as they were absent on the day of data collection. They were replaced in the manner described in the

section on sampling on page 36. Table 1 and Table 2 indicate the breakdown of the population and sample sizes of the three schools and the five grades respectively.

Table 1: Population and Sample Size in the 3 Selected Schools

School	Population size	Sample size
Mbwindi	116	59
Petauke day	426	210
Kaulu	302	151
Total	844	420

Table 2: Number of Pupils per Grade in the 3 Selected Schools

Grade	Population size	Sample size
8	193	96
9	187	93
10	182	90
11	161	81
12	121	60
Total	844	420

The grade of the schoolgirls was inadvertently left off the printed questionnaires. However, since the questionnaire was administered to each grade separately, the grade was simply written on the questionnaires after they had been collected from the participants.

5.2. SOCIO-DEMOGRAPHIC AND SOCIO-ECONOMIC PROFILE

In this section the frequency distributions of the main socio-demographic and socio-economic characteristics of the surveyed schoolgirls are presented stratified by those who had engaged in sexual intercourse (“ever had sex”) and those who were not sexually active (“never had sex”).

5.2.1. Socio-demographic Profile

This section looks at the socio-demographic background of surveyed schoolgirls, in relation to their age, tribe, religion and participation in initiation ceremonies. Table 3 shows the percentage distribution of the Petauke schoolgirls' socio-demographic background. It seen from this table that 28% of them were aged 19 and amongst those aged 19 years 63% had "ever had sex", which is considerably higher than amongst all ages where 40% had "ever had sex" and much higher than amongst 15 year olds where 11% had "ever had sex". The largest tribal group was Nsenga (46%), most of them were protestants (71%) and only 28% reported that they had undergone initiation ceremonies

Table 3: Socio-demographic Background of Surveyed Petauke Schoolgirls

	All N=420 (100%)	Ever had sex N=166 (40%)	Never had sex N= 254 (60%)
Schoolgirls' age	%	%	%
15 years	16	11	89
16 years	15	24	76
17 years	21	36	64
18 years	21	44	56
19 years	28	63	37
Schoolgirls' tribe	%	%	%
Nsenga	46	34	66
Chewa	24	39	61
Bemba	9.3	40	60
Ngoni	12	51	49
Soli	0.5	50	50
Other	8.5	54	46
Schoolgirls' religion	%	%	%
Catholic	27	43	58
Protestant	71	38	62
Muslim	1.7	43	57
Other	0.4	0	100
Participation in Initiation ceremonies	%	%	%
Underwent initiation ceremonies	28	51	49
Did not undergo initiation ceremonies	72	35	65

5.2.2. Socio-economic profile

This section looks at who the schoolgirls lived with and the employment status and employment type of the main provider (colloquially called the “keeper”) within the household. Table 4 shows that 51% of schoolgirls lived with both their parents. In 42% of cases, the main household providers were government workers, and 41% were farmers.

Table 4: Socio-economic Background of Surveyed Petauke Schoolgirls

	All N=420	Ever had sex N=166	Never had sex N= 254
People with whom the schoolgirls live	%	%	%
Grand parents	5.7	46	54
Father and Mother	51	38	62
Father alone	2.4	50	50
Mother alone	25	41	59
Brother/ Sister	13	39	61
Other	2.6	100	0
Schoolgirls' Keeper's profession	%	%	%
Unemployed	2.4	40	60
Farmer	41	38	62
Commerce	5.2	59	41
Government worker	42	39	61
Skilled worker	2.6	64	36
Specialized worker	3.6	33	67
Others	3.3	0	100

5.3. LEVELS OF SEXUAL ACTIVITY

This section looks at the schoolgirls' involvement in a relationship, their sexual experience, their age at first sexual intercourse, their motivation for engaging in sexual intercourse and the frequency of sexual activity in the last 4 weeks prior to the survey.

5.3.1. Relationships status

Table 5 highlights the schoolgirls' relationship status and their boyfriends' age and professions.

5.3.1.1. Relationships status

In 36% of cases, schoolgirls had a boyfriend (71% among those who had ever had sex and 12% among those who had never had sex). The gap in involvement in a relationship between these two groups is very large.

5.3.1.2. Boyfriend's Age

The age of the schoolgirls' boyfriends ranged from 10 to 29 years, with a median age of 22. The largest group of schoolgirls (60%), were in a relationship with boyfriends aged 20-24 years (64% among those who had ever had sex and 44% among those who had never had sex).

5.3.1.3. Boyfriends' Profession

The schoolgirls' relationship networks were wide and ranged from peer male pupils (40%) to farmers (1.3%).

Table 5: Relationships status and Boyfriends' characteristics

	All N=420	Ever had sex N=166	Never had sex N= 254
Relationship status	%	%	%
Having a boyfriend	36	71	12
Not having a boyfriend	64	29	88
Boyfriends' age	%	%	%
<15 years	1.5	0	7.4
15 -19 years	27	24	37
20 – 24 years	60	64	44
> 24 years	12	12	11
Boyfriends' profession	%	%	%
Pupil	40	37	48
Driver	7.5	8.3	7.4
Teacher	4	5.6	0
Businessman	14	15	11
Policeman	2.7	2.8	3.7
Farmer	1.3	1.9	0
Office worker	15	14	15
Health worker	3.3	3.7	0
No profession	12	12	15

5.3.2. Sexual Experience

As shown in Table 3 and summarized in Table 6, 40% of schoolgirls reported ever having had sexual intercourse (this includes vaginal, anal or oral). The analysis of the data in table 6 shows that the percentage of schoolgirls who had ever had sex increases with age, and those aged 19 were almost 6 times more likely to had ever had sex than those aged 15 years.

Table 6: Ever had Sex by Age

Schoolgirls' Age	% Ever had sex N=420
All	40
15 years	11
16 years	24
17 years	36
18 years	44
19 years	63

5.3.3. Age at Initiation of Sexual Intercourse

Table 7 also shows the age of onset of sexual intercourse as a percentage of the total sample of schoolgirls as well as amongst those who had ever had sex. As highlighted in table 7, the largest group of schoolgirls (65%) amongst those who had ever had sex, had their first act of sexual intercourse between the ages of 15 to 17 years. Twenty five percent of the total sample of schoolgirls commenced sexual activity between the ages of 15 to 17 years and 7% commenced sexual activity before they were 15 years old. Amongst those who had engaged in sexual intercourse the median age at sexual debut was 16 years.

Table 7: Age at Initiation of Sexual Intercourse

Age at first sex (in years)	% of Ever had sex N=166	% of Total Sample N= 420
< = 11	3.6	1.3
12	3.6	1.4
13	2.4	1
14	7.8	3.1
15	19	7.4
16	26	10
17	20	7.9
18	11	4.5
19	6.6	2.6

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5.3.4. Reasons for the commencing Sexual activity

As shown in table 8, forty eight percent (48%) of schoolgirls reported that they had their first act of sexual intercourse because of the desire to experiment, while 22% reported that they were coerced into it.

Table 8: Reasons for First Sex

Reasons for first sex	%
Desire to experiment	48
Need of money / material	3.6
Peer pressure	18
Preparation for marriage	5.4
Forced	22
Do not know	2.4
Other	0.6

5.3.5. Frequency of Sexual Activity in the Last 4 weeks

As shown in table 9, the majority of sexually active schoolgirls are not reporting having a lot of sexual activity. In 73% of cases, schoolgirls state that they did not have sexual intercourse in the 4 weeks preceding the survey and only 1.8% reported that they engaged in 4 or more episodes of sexual intercourse within the 4 weeks.

Table 9: Frequency of Sexual Intercourses in the Last 4 Weeks by Age

Sexual encounters in the last 4 weeks	All N= 166 %	Age in Years				
		15 %	16 %	17 %	18 %	19 %
0	73	57	73	77	77	71
1	15	43	20	9.8	15	12
2	7.2	0	0	6.6	5.3	11
3	3	0	0	3.3	2.7	4.3
4	1.2	0	0	3.3	0	1.7
> 6	0.6	0	7	0	0	0
Total	100	100	100	100	100	100

5.4. DESCRIPTORS OF SEXUAL ACTIVITY

In this section of the results, I highlight the patterns of sexual activity among schoolgirls who reported ever having had sex, especially those that directly place these schoolgirls at risk of contracting HIV.

5.4.1. Sexual Partners

The number of sexual partners the schoolgirls reported having had in their lifetime is shown in table 10. Fifty eight percent of schoolgirls have had a single lifetime sexual partner. Only 7% of schoolgirls had more than 4 sexual partners in their lifetime. However 14% of those who were 19 years of age had more than 4 sexual partners in their lifetime.

Table 10: Number of Sexual Partners in Lifetime by Age

Number of sexual partners in lifetime	All N= 166 %	Age in Years				
		15 %	16 %	17 %	18 %	19 %
1	58	72	53	65	67	51
2	24	14	27	29	20	24
3	8.5	14	13	3	13	6.9
4	2.5	0	7	0	0	4.2
5	3.7	0	0	3	0	6.9
6	1.9	0	0	0	0	4.2
10	1.4	0	0	0	0	2.8
Total	100	100	100	100	100	100

5.4.1.1. Sexual Partner during the First Episode of Sexual Intercourse

As shown in table 11, eighty six percent (86%) of schoolgirls reported that they had their first act of sexual intercourse with a fellow youth and in 1.1% of cases they had it with their blood brothers.

Table 11: First Sexual Partner

First sex partner	%
Youth	86
Teacher	3
Married man	0.5
Cousin	4.1
Brother	1.1
Other	5.3

5.4.1.2. Sexual Partner during the Last act of Sexual Intercourse

In 75% of cases (see table 12), the schoolgirls reported that they had their last act of sexual intercourse with an unmarried regular partner (someone with whom they were involved in the past) and in only 4% of cases they had their last act of sexual intercourse with an “unknown partner” (colloquial expression for “one night stand”).

Table 12: Sexual Partner during the Last Act of Sexual Intercourse

Sexual Partner during the Last Sex	All	Age in Years				
	N= 166	15	16	17	18	19
	%	%	%	%	%	%
Unmarried regular partner	75	57	80	81	69	76
Unmarried non regular partner	15	29	13	6.5	23	14
Married partner	6	0	0	6	2.7	9
Unknown partner ("one night stand")	4	14	7	6.5	5.3	1
Total	100	100	100	100	100	100

5.4.2. Types of Sexual Practices

The types of sexual practices schoolgirls reported that they had participated in are highlighted in table 13. The percentage of schoolgirls who engaged in each of these activities are a definite undercount. The undercount resulted from an erroneous instruction to the participants that they should only select one activity from a range of sexual activities provide to them. It is likely therefore that they chose the sexual activity which they most frequently engaged in. The undercount is likely to particularly have affected the practices other than skin-to-skin vaginal intercourse, since this being the most common sexual activity means that those who ticked this option could then not fill in any of the other options, hence the prevalence of the other options would be artificially very low. Therefore one can only conclude that at least the following percentages (but probably substantially more – though how much more is uncertain) of schoolgirls engaged in the activities listed in table 13.

Table 13: Risky Sexual Practices in Age Categories

Past risky sexual practices	All N= 166	Age in Years				
		15	16	17	18	19
	%	%	%	%	%	%
Skin-to-skin sex	64	43	53	42	69	76
Dry sex	13	29	20	6	15	11
Anal sex	2.3	0	7	0	6	1
Receiving oral sex	1.7	0	13	0	0	1
Giving oral sex	0	0	0	0	0	0
Not involved in any risky sexual practices	19	28	7	52	10	11
Total	100	100	100	100	100	100

5.4.3. Condom Use

The proportion of schoolgirls (in age categories) who had used a condom during their last act of sexual intercourse is shown in table 14. Forty nine percent (49%) of schoolgirls reported that they had used a condom during their last sexual encounter.

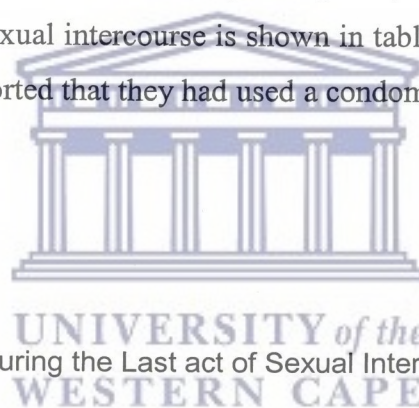


Table 14: Condom Use during the Last act of Sexual Intercourse in Age categories

Condom use at last sex	All N= 166	Age in Years				
		15	16	17	18	19
	%	%	%	%	%	%
Used a condom	49	57	33	42	33	62

5.4.4. Place of the Last Sexual Intercourse

As shown in table 15, eighty four percent of schoolgirls reported having had their last sexual encounter in their home.

Table 15: Place of the Last Sexual Intercourse in Age Categories

Place of last sex	All N= 166	Age in Years				
		15	16	17	18	19
	%	%	%	%	%	%
Bushes	8.3	29	13	9.5	5.2	6.7
Toilets	0.6	0	0	0	0	1.3
Home	84	71	74	81	92	84
Building under construction	0.6	0	0	0	2.8	0
Rest house/ hotel	6.5	0	13	9.5	0	8
Total	100	100	100	100	100	100

5.5. HIV KNOWLEDGE, PERCEIVED RISK AND SOURCES OF SEXUAL INFORMATION

This section examines the schoolgirls' HIV knowledge, their perceptions regarding their risk of contracting HIV and their main sources of information about sexual matters.

5.5.1. Knowledge about HIV

The tables below (tables 16, 17, 18, and 19) indicate what the surveyed schoolgirls knew about HIV/AIDS.

5.5.1.2. Knowledge about HIV transmission

Table 16 shows the ways the schoolgirls believed HIV was spread. Eighty seven percent (87%) of the schoolgirls knew that HIV was spread through unprotected sex with an infected partner and this percentage was exactly the same amongst those who had "ever had sex" and those who had "never had sex".

Ten percent of schoolgirls thought that being bitten by mosquitoes could result in HIV infection. A small proportion of schoolgirls thought that sharing of a bed, food and a toilet, as well as witchcraft were ways in which HIV could be

spread. A very large percentage of schoolgirls (68%) had “very high knowledge” on how HIV is being transmitted, see table 17.

Table 16: Knowledge of HIV Transmission Stratified by Sexual Activity

Ways in which HIV can be transmitted	All N=420	Ever had sex N=166	Never had sex N=254
	Correct answer %	Correct answer %	Correct answer %
Having sex with an infected person	87	87	87
Having sex without a condom	81	82	80
Sharing needle/blade with an AIDS patient	83	82	83
Being bitten by a mosquito	90	90	90
Sharing toilets with AIDS patients	96	95	96
Sharing food with AIDS patients	97	97	98
Sharing a bed with AIDS patients	96	95	97
Receiving blood contaminated with HIV	80	82	78
From an AIDS mother to the baby	74	77	72
Being bewitched by a witch	99	99	99

Table 17: Level of Knowledge of HIV Transmission Stratified by Sexual Activity

Level of knowledge on HIV Transmission	All N=420	Ever had sex N=166	Never had sex N= 254
	%	%	%
Very high*	68	69	68
High**	17	18	16
Medium***	14	12	15
Low****	1	1	1

*9-10 correct responses, **7-8 correct responses, ***5-6 correct responses ****4 or less correct responses

5.5.1.3. Knowledge about HIV Prevention

Table 18 shows what the schoolgirls believed were ways of preventing HIV infection. Only forty one percent of schoolgirls thought that a monogamous relationship with an uninfected partner (partner who has no other partners) would prevent them contracting HIV. Similarly only 55% of all schoolgirls mentioned that the use of condoms could prevent HIV infection. A relatively small percentage of schoolgirls (23%) had "high knowledge" on how to prevent being infected by HIV, see table 19.

Table 18: Knowledge of HIV Prevention by Sexual Activity

Ways in which HIV can be prevented	All N=420	Ever had sex N=166	Never had sex N=254
	Correct %	Correct %	Correct %
By having one sex partner who has no other partner	41	53	34
By using a condom during intercourse	55	64	50
By abstaining from sex	88	92	85
By cleaning the vagina immediately after intercourse	99	99	99
By isolating own self (not socializing)	82	80	83

Table 19: Level of Knowledge of HIV Prevention by Sexual Activity

Level of knowledge on HIV Prevention	All N=420 %	Ever had sex N=166 %	Never had sex N= 254 %
High*	23	31.3	18.1
Medium**	68	62.6	70.9
Low***	9	6	11

*5 correct responses, **3 or 4 correct responses, *** 2 or no correct response(s)

5.5.2. Perceived Risk of HIV

When asked if they considered themselves at risk of contracting HIV/AIDS none of the schoolgirls answered that they “did not know” but a very large percentage (88%) thought they were not at risk, with 82% of those who had “ever had sex” believing that they are not at risk of contracting HIV.

Table 20: Self Perceived HIV Risk Stratified by Sexual Activity

Self Perceived HIV Risk	All N=420 %	Ever had sex N=166 %	Never had sex N= 254 %
Did not think that they were at risk of contracting HIV	88	82	91

5.5.3. Main Sources of Sexual Information

As shown in table 21, thirty one percent (31%) of schoolgirls reported Magazines/Pamphlets as their *main* source of information about sexual matters.

Table 21: Main Sources of Information about Sexual Matters

Source of information about sexual matters	All N=420	Ever had sex N=166	Never had sex N= 254
	%	%	%
Radio	13	12	15
Grand mother	11	12	10
Magazine/Pamphlet	31	30	31
Friends	18	21	15
Mother	7	5	9
Health personnel	14	13	15
Teachers	3.6	3.6	3.9
Initiation ceremony	1.9	3	1.2
Others	0.5	0.6	0.8

5.6. GENERAL SEXUAL OPINIONS

Theory and research suggests that attitudes and norms surrounding sexuality and HIV/AIDS create the context in which adolescent girls form opinions regarding sexual behaviour options. Tables 22 and 23 highlight the schoolgirls' general sexual opinions, stratified by age and sexual activity.

Table 22 shows that 41% of schoolgirls reported that they believed it was not possible for them to remain a virgin till marriage and 49% believed that boys pressurize girls into engaging in sexual intercourse. The percentage of those who believe that boys pressurize girls into engaging in sexual intercourse rises to 60% amongst those who had ever had sex. A very high percentage of schoolgirls (65%) believed that availability of condoms encourages youths to engage in sexual intercourse.

Table 22: Opinions on Sexual Attitude, Condoms and Peer Pressure by Age Group

Attitudinal Sexual Opinion	All (N= 420)			<=17 Years(N= 214)			>17 Years (N= 206)		
	A* %	D** %	DK*** %	A* %	D** %	DK*** %	A* %	D** %	DK*** %
It is not possible for girls to remain virgin till marriage	41	32	27	36	29	35	43	34	23
Girls prefer married partners	22	42	36	19	40	41	23	43	34
There is no danger of HIV/AIDS for skin-to-skin sex with a young boy	6.4	73	20	7.9	67	25	5.8	76	18
Condoms are not good for youth because they encourage them to have sex	65	18	17	61	17	21	67	18	15
Condoms reduce sexual pleasure	12	27	61	9.4	18	72	13	31	57
Girls do not used condoms because they trust their partners	14	52	33	18	39	43	13	58	29
Boys put girls under pressure to have sex	49	19	32	40	17	43	53	20	27

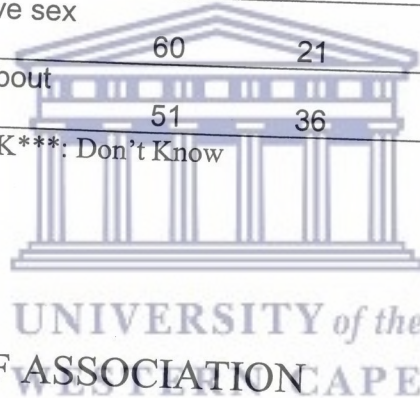
A*: Agree, D**: Disagree, DK***: Don't Know



Table 23: Opinions on Sexual Attitude, Condoms and Peer Pressure by Sexual Activity

Attitudinal Sexual Opinion	Ever had Sex (N=166)			Never had Sex (N=254)		
	A*	D**	DK***	A*	D**	DK***
	%	%	%	%	%	%
It is not possible for girls to remain virgin till marriage	42	36	22	40	30	309
Girls prefer married partners	21	61	18	22	30	48
There is no danger of HIV/AIDS for skin-to-skin sex with a young boy	6	77	18	6.7	71	22
Condoms are not good for youth because they encourage them to have sex	66	21	13	65	16	19
Condoms reduce sexual pleasure	18	38	45	7.9	20	72
Girls do not use condoms because they trust their partners	21	65	15	9.8	45	46
Boys put girls under pressure to have sex	60	21	19	42	18	40
It is not possible to talk to parents about sex	51	36	13	44	32	24

A*: Agree, D**: Disagree, DK***: Don't Know



5.7. MEASURES OF ASSOCIATION

To answer the points raised in the objectives section, around investigating the demographic and socio-economic factors that may influence adolescent schoolgirls' sexual behaviour, I examined the association between three independent variables and various dependent variables related to sexual behaviours and level of knowledge of HIV.

Schoolgirls' aged 16 years and below were compared with those older than 16, while schoolgirls who never participated in initiation ceremonies were compared with those who had participated and finally schoolgirls who lived with their biological parents were compared with those who did not live with their biological parents. The independent variables above were compared with the dependent variables of: knowledge of HIV transmission; knowledge of HIV

prevention; having a boyfriend; sexual activity; use of condoms; number of life-time sexual partners; engaging in risky sexual activities and age of sexual debut.

The results are presented in two sections. The first section covers statistically significant associations, whilst the second section covers those associations which were not statistically significant.

5.7.1. Statistically Significant Associations

The 2x2 tables of the statistically significant associations between the independent and dependent variables, together with their prevalence ratios and the confidence intervals are summarised in tables 24a, 24b and 24c.

Table 24 a: Statistically Significant Association

	Have a boyfriend	Don't have a boyfriend	Total
Schoolgirls older than 16 years	125	168	293
Schoolgirls 16 years old or younger	24	103	127
Total	149	271	420

Prevalence Ratio = 1.4 95%CI (1.2 – 1.6)

Table 24 b: Statistically Significant Association

	Ever had sex	Never had sex	Total
Schoolgirls older than 16 years	144	149	293
Schoolgirls 16 years old or younger	22	105	127
Total	166	254	420

Prevalence Ratio = 1.6 95%CI (1.4 – 1.8)

Table 24 c: Statistically Significant Association

	Ever had sex	Never had sex	Total
Schoolgirls who attended initiation ceremonies	60	57	117
Schoolgirls who never attended initiation ceremonies	106	197	303
Total	166	254	420

Prevalence Ratio = 1.3 95%CI (1.1 – 1.6)

5.7.2. Statistically Non Significant Associations

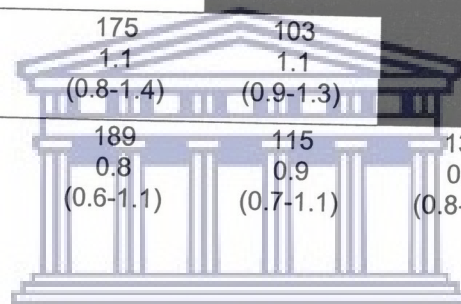
Table 25 highlights the statistically non-significant associations between the listed independent and dependent variables.



Table 25: Statistically Non Significant Associations

		Good Know- ledge about HIV Transmission	High level Knowledge about HIV Prevention	Having a boyfriend	Ever had Sex	One lifetime Sexual Partner	Did not use a Condom with last sexual encounter	Involved in at least one Risky Sexual practice	Sexual Debut on or before Age 16
Schoolgirls older than 16 years	N PR 95% CI	224 1.1 (0.8-1.6)	178 1.2 (0.9-1.5)			84 1.0 (0.7-1.5)	72 1.2 (0.8-1.7)	115 1.1 (0.5-2.6)	
Non-Initiated schoolgirls	N PR* 95% CI	227 1.1 (0.7-1.6)	175 1.1 (0.8-1.4)	103 1.1 (0.9-1.3)		63 1.0 0.8-1.4	51 0.8 (0.6-1.1)	82 1.3 (0.7-2.6)	64 0.9 (0.7-1.2)
Schoolgirls living with biological parents	N PR* 95% CI	243 0.6 (0.4-1.1)	189 0.8 (0.6-1.1)	115 0.9 (0.7-1.1)	130 0.9 (0.8-1.2)	79 0.8 (0.6-1.2)	65 1.1 (0.8-1.5)	102 0.8 (0.3-1.7)	83 0.9 (0.6-1.2)

PR*: Prevalence Ratio



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CHAPTER 6: DISCUSSION

In this chapter, I will discuss the key results of this study in relation to the objectives as well as to the findings of similar studies.

In the first section I will discuss the schoolgirls' reported sexual behaviours.

In the second section I will discuss the schoolgirls' level of HIV knowledge and their views and opinions on a variety of sexual activities.

In third section, I will discuss the socio-demographic and socio-economic factors influencing the schoolgirls' sexual behaviour and level of knowledge of HIV.

In the last section, I will discuss the study limitations and their probable effect on the results.

6.1. SCHOOLGIRLS' EXHIBITED SEXUAL BEHAVIOUR

The findings of my survey regarding the behaviour of sexually active adolescent school girls raise concerns regarding the likelihood of them contracting HIV and other sexually transmitted infections. The finding that the percentage of adolescent girls who had "ever had sex" increases markedly with age (increased almost six fold from 11% at age 15 to 63% at age 19), concurs with the findings of the Zambia Sexual Behaviour Survey of 2003, in which a 5.6 fold increase was noted (14% at age 15 to 79% at age 19) (CSO and ORC, 2002b). The proportion of sexual active Petauke schoolgirls (40%) is similar to the national Zambian proportion of 43% (CSO and ORC, 2003) but is lower than the one in urban areas of Zambia of 56% (Fetters, 1997) and in more urbanized countries such as South Africa (48%) (Pettifor, 2004). This difference may be explained by the presence of different pressures on rural schoolgirls to participate in sexual intercourse, than those present amongst urban schoolgirls as shown in the study by Dijk (Dijk, 2002)

Generally, schoolgirls seem to prefer having sex with their fellow youths for their first sexual intercourse (86%). The median age difference between these schoolgirls and their male partners was 4 years. These results are not consistent with those found by Baya (2003) in Burkina Faso, and by Zanou (1999) in Ivory Coast, showing respectively that 95% and 89% of sexually active female adolescents have had their first sexual experience with older men (Baya, 2003; Zanou, 1999). Age differences between young people and their sexual partners have been hypothesized to increase the risk of HIV infection amongst adolescents. Older partners are more likely to have been exposed to HIV than partners of the same age group and older male partners may be members of age cohorts with higher levels of HIV infection (Pettifor, 2004). This is because usually the older male partners of female adolescents have probably been engaged in sexual activity for a longer period and therefore have been at greater risk of contracting HIV.

The data from Petauke shows that the schoolgirls' median age at sexual debut is low, 16 years. This result is consistent with that of other studies conducted on the African continent, showing that the age at first sexual intercourse has become lower almost everywhere in Africa for female adolescents, ranging from 15 to 19 years (Kalunde, 1997; Pettifor, 2004; UNAIDS, 1997). The lowering of the sexual initiation age is of great concern given that the risk of contracting HIV is higher amongst female adolescents who have their first sexual experience before the age of 16 and given that there are active campaigns in Zambia encouraging adolescents to delay the onset of sexual activity (Kabiga, 2000).

In Zambia, the level of condom use has remained static (from 36% to 35%) amongst adolescent girls between 2000 and 2003 (CSO and ORC, 2002, CSO and ORC, 2002b). Although condom use in Petauke district was higher than in Zambia generally, less than half (49%) of the sexually active schoolgirls in

Petauke used a condom during their last act of sexual intercourse. Even though this study, in which 71% of sexually active schoolgirls had a regular boyfriend, found no correlation between having a regular boyfriend and the non-use of condoms, studies have shown that stable relationships reduce the use of condoms among adolescents, probably because they view unprotected sex as not being risky because their partners are regular ones, as opposed to casual ones (UNAIDS, 1997). Thus unprotected sex more frequently occurs with regular partners, with the cumulative risk of HIV infection rendered invisible to the adolescent by the apparent/assumed/promised “monogamy” and commitment of the regular partner (UNAIDS, 1997). Baza (2003) found that a significant proportion of adolescents who knew about contraceptive methods at the time of their first sexual experience, have used condoms. This finding suggests that early sexual and reproductive health education for both male and female Zambian adolescents both in school and outside school, with an emphasis on condoms might increase the usage of condoms. This would to some extent protect adolescents against contracting HIV and other sexually transmitted infections. Unfortunately, sexual and reproductive health education is strongly opposed by traditional societies and by certain religious groups and consequently by many parents, who believe that it results in an increased prevalence of sexual activity (Gupta, 2000; Madlala 2002; Mturi, 2001).

Petauke schoolgirls, like their urban counterparts in Zambia report that they infrequently engage in sexual intercourse (Pettifor, 2004 and Feldman, 1997). The fact that 74% of those who had “ever had sex” reported no sexual encounters in the last four weeks prior to the survey, and 59% reported having only one sexual partner in their lifetime, is encouraging, as the frequency with which adolescents engage in sexual intercourse, the types of sexual partners and engaging in unsafe sexual practices, have been identified as important indicators of the number of potential exposures to HIV infections (Pettifor, 2004; CSO and ORC, 2003b).

A higher number of Petauke schoolgirls, 48%, had their first sexual intercourse for the simple reason of experimentation, compared to 30% in South Africa (Pettifor, 2004). In Petauke the use of force was reported as being present in 22% of first intercourse acts and Gillan (2004) in her study found that young women whose romantic relationships continued after their first act of sexual intercourse, all reported that their first act of sexual intercourse was wanted, that they didn't come under pressure and had no regrets, whilst young women whose relationships survive following their first sexual activity reported that it was either unwanted or expressed ambivalent feelings (Gillan, 2004). Gender norms related to sexuality often place men in dominant roles and women in subordinate or passive roles. These unequal relations, in turn, are often further reinforced by larger social, economic, and legal inequalities. The result is that inequalities in power between men and women limit women's ability to control whether, when, and how to engage in sexual relations (Gupta, 2002).

Need of money/resources was also mentioned in 3.6% of cases, as the reason for their first act of sexual intercourse among Petauke schoolgirls. This finding is similar to the South African one of 3% (Pettifor, 2004), but very low compared to 78% in Kenya (Luke, 2003) and 33% in Ghana (Afenyadu, 2003). This big difference may be explained by the fact that my study and the South African one focused only on the reasons for their first act of sexual intercourse while the Kenyan and Ghanaian studies explored payment in regard to all acts of sexual intercourse. Studies from Cameroon, Kenya, Nigeria, and South Africa found that among the factors influencing female adolescents to receive money or gifts in exchange for sex in sub-Saharan Africa, were that they exchange sex to get funds to cover education-related expenses and gain connections in social networks (Chatterji, 2004). Other qualitative studies conducted in Cameroon, Ghana, Kenya, Nigeria, Sierra Leone, Uganda, and Zimbabwe suggested that peer pressure to obtain luxury personal items motivates many adolescents to engage in transactional sex while parental pressure emerged as an important issue in

qualitative studies conducted in Ghana, Guinea, Kenya, Sierra Leone, Tanzania, Uganda, and Zimbabwe (Chatterji, 2004).

6.2. SCHOOLGIRLS' LEVEL OF HIV KNOWLEDGE AND THEIR OPINIONS ON SEXUAL ACTIVITIES

Petauke schoolgirls, in 31% of cases, used magazines/pamphlets as their main source of information about sexual matters, while their mothers were their main source of knowledge in only 7% of cases. This finding supports what qualitative research in Africa had established, namely that parents do not communicate adequately with their children about sexual matters and that children, who feel reluctant or too embarrassed to approach their parents with sexual topics, turn to more formal sources of sexual health education such as school-based lessons (UNAIDS, 1997).

In relation to HIV, the knowledge on its transmission was good amongst schoolgirls, with 86% having a high/very high knowledge; while the knowledge on specific ways of preventing HIV infection was much worse, with only 23% having a high level of knowledge on prevention. This picture is similar to that of other African countries with generalized HIV epidemics such as Cameroon, Central African Republic, Equatorial Guinea, Lesotho, Sierra Leone and Mozambique, where more than 80% of young women aged 15 to 24 years do not have sufficient general knowledge about preventing HIV infection (UNAIDS, 2001, UNICEF, 2002).

Compared to the Zambian picture, the level of misconceptions on the HIV transmission amongst Petauke schoolgirls was very low, with 10% thinking that HIV could be transmitted by mosquitoes (22% among female adolescents in Zambia) and 1% by witchcraft (14% among female adolescents in Zambia) (CSO and ORC, 2002b). These misconceptions among adolescents are not specific to Zambia; surveys from 40 countries indicated that more than 50% of young people

aged 15 to 24 years harbour serious misconceptions about how HIV/AIDS is transmitted (UNICEF, 2002). Some of these misconceptions and lack of knowledge are not easy to fix, because the African culture does not encourage parents to discuss the details of all aspects of sexual and reproductive health with their children (Mturi, 2001). This was also seen in my study in which 47% of schoolgirls thought that it was not possible for them to talk with their parents about sex. On the contrary, adolescents prefer to discuss sexual issues with close friends/cousins of the same sex and peer group (Kalunde, 1997). Studies have shown that the fear that parents have in discussing sexual matters with adolescents is the fear of resulting increased sexual activity amongst them, as they are then more aware and knowledgeable about sexual activity. It is however the opposite that is true. Correct information given to the adolescents makes them delay their sexual activity and later protect themselves against unwanted pregnancy, STIs and HIV infection (UNICEF, 2002; Pettifor, 2004).

The breakdown in traditional communication on sexuality observed in Zambia could be a contributing factor to the non perception of susceptibility and risk for HIV infection amongst the sexually active schoolgirls, who in 82% of cases in my study, did not perceive themselves at risk of HIV infection. This is higher than findings in Zambia generally (73% of sexually active female adolescents in Zambia thought that they were at risk of contracting HIV) (CSO and ORC, 2002b), and much higher than in other parts of Africa; 55% in urban Zambia (Feldman, 1997), and 36% in South Africa, Haiti and Zimbabwe (Pettifor, 2004; UNAIDS, 2001)). Even when they are informed or have accurate information about sex and HIV prevention, the societal expectation that a young woman should be uninformed, makes it difficult for them to be proactive in negotiating safer sex (Gupta, 2002).

6.3. SOCIO-DEMOGRAPHIC AND SOCIO-ECONOMIC FACTORS INFLUENCING SCHOOLGIRLS' SEXUAL BEHAVIOUR AND LEVEL OF KNOWLEDGE OF HIV

This study has shown a statistically significant association between the schoolgirls' age and being in a relationship and being sexual activity. A positive association was also found between attendance at initiation ceremonies and sexual activity.

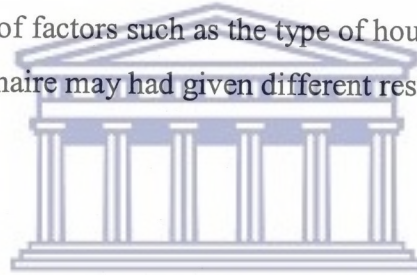
Schoolgirls older than 16 years were found to be more likely to have a boyfriend compared to younger ones. Usually, from around the time of puberty onwards, interest in the opposite sex develops and friendship groups may provide the initial safety and security needed while learning to relate to the opposite sex. With age, adolescents become gradually more dependent on peers, as ties to parents are loosened and greater independence is gained. The older the adolescents, the more they feel that their friends understand them better than their families and the more they tend to involve themselves in relationships, hence this association of a relationship with increased age.

The association between older age and sexual activity may be explained by the rapid physical, emotional and social changes that adolescent schoolgirls go through. This gives them more freedom to "socialize", be involved in relationships, and find opportunities to engage in sexual activity.

During the initiation ceremonies, adolescent girls are prepared for marriage and taught about sex, childbearing and how to focus on the man's sexual pleasure and not to refuse the husband's demands for sex. This initiation curriculum centered on male sexual needs/desires may explain the association between initiation ceremony and the higher likelihood of ever having had sex. After the initiation a commonly perceived permissible, but actually culturally frowned upon, activity

for the adolescent girl, is to find a male partner and practice what she was taught, while awaiting marriage. This ties in with the finding that 41% of adolescents did not think it was possible to remain a virgin until marriage, probably due to their desire to experiment (48%) and due to perceived male pressure to commence sexual activity (49%).

There was no association found between socio-economic factors and the level of knowledge of HIV or having a boyfriend, having one lifetime sexual partner, not using a condom, being involved in risky sexual practices or initiating sexual activity by age 16. This may be explained by the fact that the information gathering tool (questionnaire) was too blunt, with a limited number of factors being used in the questionnaire to investigate the socio-economic status of the schoolgirls. The addition of factors such as the type of housing, household income and assets in the questionnaire may had given different results.

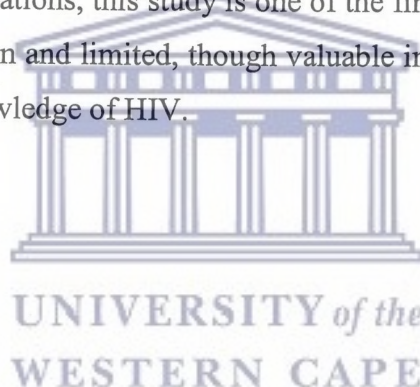


6.4. STUDY LIMITATIONS AND THEIR IMPLICATIONS

The generalisability of my findings is limited. Although my study sample is reasonably representative of the socio-demographic and socioeconomic groups of the larger schoolgirl population from which the sample was taken, I do not have additional demographic, sociologic, economic and sexual experience information about the girls who are not in secondary schools. In addition, the sensitive nature of this topic and the closed questions used in the survey could have made schoolgirls who participated in the study give a “rosier” account of their sexual experience. Furthermore, our sample is limited to schoolgirls aged 15 to 19 years; hence our findings should be interpreted with caution because it is conceivable that they include two age extremes of adolescents with relatively different levels of sexual experience and knowledge. For the older adolescents, recalling the circumstances of the first sexual experience and the number of life

time sexual partners could have been difficult. More research is needed on older adolescents to investigate how their knowledge and sexual behaviour changes as they mature and gain more exposure and knowledge. This study was not a cohort one and therefore it could not address the extent to which schoolgirls' knowledge, perceptions and attitudes were motivating their sexual behaviour. Lastly, it did not have a qualitative component and hence could not shed light on the reasons and explanations behind the behaviours portrayed by the schoolgirls, as highlighted in the study. Despite this some limited speculation based on other studies has been advanced in the discussion above and while these speculative comments are clearly not entirely valid, they do aid in providing some plausible explanations for various behaviours, opinions and levels of knowledge.

Despite these limitations, this study is one of the first in Petauke district to provide a broad description and limited, though valuable insight, into schoolgirls' sexual behaviour and knowledge of HIV.



CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1. CONCLUSION

This study describes the pattern of sexual behaviours and level of knowledge of HIV amongst adolescent schoolgirls, in rural district in Zambia.

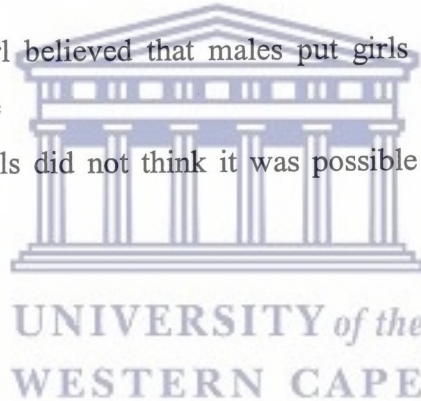
The patterns of sexual behaviour noted were:

- 40% of schoolgirls had initiated in sexual activity
- the percentage of sexually active schoolgirls increased markedly with age
- those who attended initiation ceremonies were more likely to be sexually active
- 58% of sexually active schoolgirls had one partner and 24% had 2 partners
- the frequency of sexual intercourse was quite low with 73% having no sexual activity in the past month and 15% having one episode of sexual intercourse in the past month
- 86% of sexually active schoolgirls had a fellow adolescent as their first sexual partner
- at least 64% had engaged in skin-to-skin sexual intercourse
- 51% of them had not used a condom during their last act of sexual intercourse

The schoolgirls' knowledge and opinions on sexual activity and HIV were diverse and marked by the fact that:

- 48% of the sexually active schoolgirls engaged in sexual activity due to their desire to experiment
- 22% of the sexually active schoolgirls were pressured into their first act of sexual intercourse

- 68% of schoolgirls had excellent knowledge of HIV transmission mechanisms and 17% had good knowledge of HIV transmission mechanisms
- however only 23% had excellent knowledge of HIV prevention techniques
- 88% of schoolgirls and 82% of sexually active ones did not think that they were at risk of contracting HIV
- 65% of schoolgirls thought that availability of condoms encourages sexual activity
- 21% of sexually active schoolgirls did not use condoms as they trusted their partners
- 41% of schoolgirls did not think it was possible to remain a virgin until marriage
- 49% of schoolgirl believed that males put girls under pressure to have sexual intercourse
- 51% of schoolgirls did not think it was possible to talk to their parents about sex



7. 2. RECOMMENDATIONS

Based on the description of the Petauke adolescent schoolgirls patterns of sexually activity and their level and source of knowledge on HIV, and with the desire to assist in promoting healthy and safe sexual behaviour, I am recommending the following points to the district officials:

7.2.1. Health and educational authorities should tailor life skills

based education interventions for schoolgirls and schoolboys

This study has shown that a large proportion of adolescent schoolgirls aged 15 to 19 years are still harbouring misconceptions on HIV prevention, do not believe they are at risk of contracting HIV, are sexually active and involved in risky sexual behaviour. Psychosocial and interpersonal skills educational materials should be developed and provided by both the Ministries of Health and Education. These materials should be evidence based and tailored in such a way that they help schoolgirls and schoolboys make informed sexual decisions, communicate effectively on sexual issues and develop coping and self-management skills that may help them lead a healthy sexual life.

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7.2.2. Health, educational and community authorities should

pursue strategies that reach schoolgirls before they become sexually active.

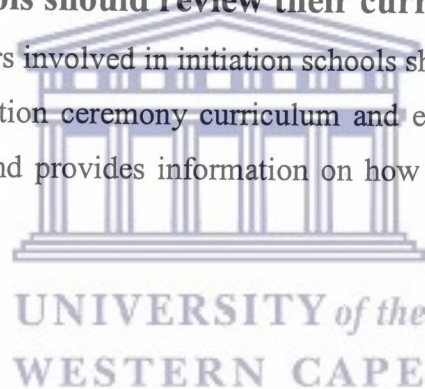
The median age at initiation of sexual activity (16 years) and the sexual activity prevalence of 40% among schoolgirls shows that there is still hope for the reduction of sexual debut among schoolgirls. However the steady decrease in age at onset of sexual activity in the face of an HIV epidemic is worrying. The above mentioned authorities should utilize the findings highlighted in the motives for first sex, the type of sexual partners and the sources of information on sexual issues, to design strategies that can be directed to young schoolgirls (at primary

and secondary schools), with a view to empowering them to postpone their sexual debut.

To this end health and educational authorities should collaborate to provide sex information materials in an appealing manner. For example through school shows, clubs and forums, preferably conducted by peer educators, schoolgirls can be provided with factual information on the power of abstinence in an entertaining format that might include music, drama, competitions, film shows and games. To ensure that sex education reaches schoolchildren early on in life and that they consistently engage with and discuss their sexual options, it might be useful to have sex education as a formal part of the school curriculum.

7.2.3. Initiation schools should review their curriculum

Community leaders involved in initiation schools should review the sexual component of their initiation ceremony curriculum and ensure that it addresses risky sexual behaviour and provides information on how to prevent contracting HIV and other STIs.



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APPENDIX:
QUESTIONNAIRE PACKET



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Dear Student

I am conducting a study on the *Assessment of Sexual Behaviour and Knowledge of HIV amongst Adolescent Schoolgirls in a rural District in Zambia* as part of my Master Degree in Public Health, with the University of the Western Cape, South Africa.

The results of this survey will assist the community, the ministry of health and the ministry of education in developing appropriate preventive and promotive strategies, to equip both you the adolescent girls and the boys with tools to develop positive sexual attitudes and adopt safe sexual behaviours.

Attached to this letter is a questionnaire that contains a number of questions to which you will be asked to respond. Please look over the questionnaire and, if you choose to answer it, please sign in the space provided below. Your participation is voluntary and there is no penalty if you do not participate. If you feel uncomfortable during the completion of the questionnaire you may omit the questions that make you uncomfortable or you may withdraw from the study completely without providing any reason for your withdrawal. I guarantee that your responses will not be identified with you personally.

Do not write your name on this questionnaire. I do not need to know who you are. The results of this research will be summarized and presented in all the high schools of Petauke.

I accept to participate in this study

Signature

Sincerely,

Dr. Mutombo Dhally Menda

Nyanje Mission Hospital

P. Bag 1 Sinda

Email: menda@zamnet.zm

Cell: 097-794101

STUDY QUESTIONNAIRE

Questionnaire No:

Code of the School:

Date of Survey: / / 2004

A. SOCIO-DEMOGRAPHIC INFORMATION

1. How old are you?Years

2. What is your Tribe?

1. Nsenga 2. Chewa 3. Bemba 4. Ngoni 5. Soli
6. Other (specify) _____

3. What is your Religion?

1. Catholic
 2. Protestant (RCZ, Baptist, SDA, Pentecostal, Jehovah Witness, Pilgrim)
 3. Muslim
 4. None
 5. Other (specify) _____



B. SOCIO-ECONOMIC CHARACTERISTICS

4. With whom do you live together?

1. Grand Parents 2. Father and mother 3. Father alone 4. Mother alone
 5. Brother / Sister 6. Other, specify _____

5. Keeper's profession?

1. Unemployed 2. Farmer 3. Commerce 4. Manager/ Office
 worker 5. Skilled worker 6. Specialized worker. 7. Other, specify-----

C. KNOWLEDGE AND ATTITUDES REGARDING SEXUALITY AND

HIV/AIDS:

6. How can HIV be passed from one person to another? (Tick the appropriate box)

- 1. Having sex with an infected person
- 2. Having sex without a condom
- 3. Sharing needle/blade with an AIDS patient
- 4. Being bitten by a mosquito
- 5. Sharing toilets with AIDS patients
- 6. Sharing food with an AIDS patient
- 7. Sharing a bed with an AIDS patient
- 8. Receiving blood contaminated with HIV
- 9. From an AIDS mother to the baby
- 10. Being bewitch by a witch

7. What can you do to protect yourself from AIDS? (Tick the appropriate box)

- 1. By having one sex partner who has no other partner
- 2. By using a condom during intercourse
- 3. By abstaining from sex
- 4. By cleaning the vagina immediately after intercourse
- 5. By isolating myself

8. Do you consider yourself at risk of getting HIV/AIDS?

- 1. Yes
- 0. No
- 2. Don't know

9. How old were you when you participated in the initiation ceremony?

.....Years

- 0. Not yet initiated

10. What is your main source of information about sexual matters? (Tick one)

- 1. Radio
- 2. Grand mother
- 3. Magazine / Pamphlet
- 4. Friends
- 5. Mother
- 6. Health Personnel
- 7. Teachers
- 8. Initiation ceremony
- 9. Other, specify _____

11. Do you agree or disagree with the following statements?

- | | 1. Agree | 2. Disagree | 3. Don't know |
|---|-------------------------------------|--------------------------|--------------------------|
| 1. It is not possible for girls to remain a virgin till marriage | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Boys put girls under pressure to have sex | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Condoms are not good for youth because they encourage them to have sex | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Condoms reduce sexual pleasure | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. It is not possible to talk to parents about sex | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Girls do not use condoms because they trust their partners | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Girls prefer married partners | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. There is no danger of HIV/AIDS for skin-to-skin sex with a young boy | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D. SEXUAL EXPERIENCE

12. Do you presently have a boyfriend?

- 1. Yes
- 0. No

13. How old is your boyfriend?

.....Years

- 0. Don't have a boyfriend
- 1. Don't know

14. What is you boyfriend's profession?

- 1. Pupil 2. Driver 3. Teacher 4. Businessman 5. Policeman
- 6. Farmer 7. Officer worker 8. Health worker 9. No profession
- 10. Do not have a boyfriend

15. How old were you when you had sex for the first time?

.....Years

- 0. Still a virgin.

16. With whom did you have your first sex?

- 1. Fellow youth
- 2. Teacher
- 3. Married man
- 4. Cousin
- 5. Brother
- 6. Other, specify _____
- 7. Never had sex



17. What pushed you to have your first sex?

- 1. Desire to experiment
- 2. Need of money/ material things
- 3. Peer pressure
- 4. To prepare for marriage
- 5. Forced to have sex
- 6. Other, specify _____
- 7. Never had sex
- 8. Don't know

18. How many times did you have sex in the past 4 weeks?

.....Times

- 0. Still a virgin
- 1. Don't know

19. With how many boys/men did you have sex in your life?

.....Boys/men

- 0. Never had sex

20. With whom did you have your last sex?

- 1. Unmarried regular partner
- 2. Unmarried non regular partner
- 3. Married partner
- 4. Unknown partner
- 5. Never had sex

21. Which ones of these sexual practices have you practiced in the past? (tick

- one)**
 - 1. Skin-to-skin sex
- 2. Dry sex
- 3. Anal sex
- 4. Giving oral sex
- 5. Receiving oral sex
- 6. Never had sex
- 7. None of these



22. Did you or your partner use a condom when you had last sex?

- 1. Yes
- 0. No
- 2. Never had sex

23. Where did you have your last sex?

- 1. Bushes
- 2. Toilet
- 3. Home
- 4. Building under construction
- 5. Abandoned car
- 6. Field
- 7. Rest house / hotel
- 8. Other, specify _____
- 9. Never had sex



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