

# **The Association between Violence and Early Sexual Debut among Youth in South Africa, 2012**

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A RESEARCH REPORT SUBMITTED TO THE SCHOOL OF SOCIAL SCIENCE,  
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## **Declaration**

I, Palesa Mataboge, hereby declare that this research report is my own original work. It is being submitted to the Faculty of Humanities and Social Sciences, University of the Witwatersrand, Johannesburg. It is submitted in partial fulfilment of the requirement for the degree of Master of Arts in the field of Demography and Population Studies. I declare that to the best of my knowledge it has not been submitted before in part or in full for any degree or examination at this or any other university.

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## **List of abbreviations and acronyms**

DALY: Disability adjusted life years

DV: Dependent variable

HIV: Human immunodeficiency virus

IV: Independent variable

NIDS: National Income Dynamics Study

PSU: Primary sampling unit

STI: Sexually transmitted infection



## **ABSTRACT**

**Introduction:** Early sexual debut remains a public health concern, and it continues to gather interest among researchers. In part interest is driven by the unchanging age at sexual debut and even though the age of sexual debut remains unchanged, the rate of early sexual debut keeps rising in many developing countries (Pettifor et al, 2009). Approximately 60% of young people in South Africa report to have had sexual intercourse by the time they are 16 years old (Peltzer, 2006). Furthermore early sexual debut has been identified as an indicator of risky sexual behaviour; as it exacerbates the individuals exposure to sexually transmitted diseases especially HIV, which is most prevalent among the youth in the ages 15-24 years old (Mchunu, 2012). Similarly, violence also remains a public health concern as it endangers the development of young people. Approximately 3.5 million people report injuries caused by violence every year, and violence accounts for 30% of mortality (Norman et al, 2010). A prevalent feature of violence is the dual role of young men as victims and as perpetrators of violence (Seedat et al, 2009). In some areas of South Africa homicide deaths of males outnumber those of females at a rate of 7 males to 1 female death (Seedat et al, 2009). Furthermore other reported consequences of violence among the youth are mental health problems, injuries and a negative education outcome among young people in South Africa. Young people are future leaders and parents of South Africa and it is therefore important to have a study that will examine the association between two factors that have been deemed as risk factors for the development of young people. The general objective of this study is to examine the association between violence and early sexual debut among youth in South Africa. The first specific objective of the study is to identify the level of early sexual debut among youth in South Africa, while the second specific objective of the study is to examine the association between violence and early sexual debut controlling for socio-economic and demographic variables.

**Methodology:** Data was obtained from the National HIV communication survey with a sample of 1 873,956 females and 932,397 males. who are in their youth (15-24 years old). Data was managed using the STATA 12 and was analysed in a way that answers the objectives of the study. For descriptive analysis, frequency tables and graphs were used. A chi-square test was conducted, to test for an association between violence and early sexual debut and for multivariate analysis the study employed a multinomial logistic model.

**Results:** Results from the multinomial logistic regression show that violence and early sexual debut are not significantly associated (pvalue=0.107), however respondents who did not experience violence have 0.34 lower risk of initiating sexual debut before the age of 16. Furthermore results show that sexual debut is most common in the age group 16-19 (74%) followed by sexual debut before the age of 16 (14%). Results further show that males (17%) engage in sexual intercourse at an early age compared to females (12%). Violence is also higher among males (7%) as compared to females (5%).

**Discussion:** Violence and early sexual debut are prevalent issues that pose a threat to the development of youth in South Africa. Lower age at sexual debut has proven to be associated with inconsistent use of condoms as well as having multiple sexual partners. Plausible reasons to this are that young people don't see themselves as at risk of contracting HIV, secondly young people are influenced by their peers and act out of peer pressure. Violence was low among youth at the time of the survey; this contradicts evidence from previous studies that have shown that violence is high among youth in South Africa, and consequently accounts for 30% of mortality. However the low levels of violence indicated in the study could be attributed to underreporting of violence as the survey was self-reported.

**Conclusion:** The current study has found that violence and early sexual debut are not significantly associated; however violence does increase the risk of initiating sexual intercourse at an early age. Furthermore risky sexual practices such as inconsistent use of condoms and having multiple sexual partners have been associated with early sexual debut, all which are a risk factor to the development and reproductive health of young people. The study has provided a base for further to be built from, as it provides levels and descriptions of early sexual debut and violence among youth in South Africa. Furthermore, the study indicates that it is important interventions that had been set in place be updated, as results from the study have shown that violence increases the risk of engaging in early sexual debut. It is also important that interventions aimed at delaying sexual debut be reviewed as young people who engage in sexual activity do so with limited knowledge.

## **Chapter 1: Introduction**

### **1.1 Background**

Early sexual debut is a world-wide concern, and continues to garner much interest among researchers. In part, interest has been driven by the unchanging age at sexual debut, which engenders high-risk consequences such as HIV/AIDS infection, unplanned pregnancy and disrupted education among youth. These consequences are evident among the youth in sub-Saharan Africa (Pettifor et al, 2009). Age at sexual debut remains constant; however, the context of sexual debut among youth has changed. Previously sexual debut occurred within the confines of marriage, which isn't the case nowadays. Due to this, having multiple sexual partners has become an acceptable practice among young people, leaving them exposed to contracting HIV/AIDS.

Previous literature has defined early sexual debut to be at 15 years and younger, however this study defines early sexual debut as according to the South African Sexual Offences Act, which prescribes the age of consensual sex to be 16 years old (Mathews et al, 2009; Pettifor et al, 2009).

In sub-Saharan Africa high rates of early sexual initiation are mostly reported among young females. A study that examined community factors affecting sexual debut across four countries, namely Ghana, Malawi, Burkina Faso and Uganda, reports that approximately 60% of females and 45% of males have had sexual intercourse by the age of 18. High rates such as these are partially a result of child marriage in some African countries, such as Ethiopia, Malawi, Uganda and Burkina Faso (Stephenson et al., 2014). The median age at marriage in these countries ranges from 15–18 years for females, and for males from 22–26 years. A

study in Uganda shows disparities in age at sexual debut between males and females. It reports that 20% of females aged 20–24 years indicated having experienced sexual debut at the age of 15, while only 10% of males in the same age group reported the same (Darabi et al., 2008).

In 2005 in Ethiopia 32% females reported having initiated sexual intercourse by the age of 15, and 65 % before age 18 (Mazengia & Worku, 2009). Early female sexual debut in cases of child marriage exposes females to greater risk of contracting STIs such as HIV and having unplanned and badly timed pregnancies (Darabi et al., 2008; Mazengia & Worku, 2009).

Even though child marriage is not practised in South Africa, young people begin having sexual intercourse at an early age. However in South Africa males initiate sexual intercourse at a much earlier age than females. A study conducted in 2005 reports that 6% of females and 12% of males reported sexual debut at the age of 15; by the time they reach 18 years, 42% of females and 63% of males had become sexually active (Berry and Hall, 2009). In another study conducted in 2005, approximately 72% of respondents aged 17–18 were already sexually active (Lam et al., 2013).

Young people are exposed to more than just sexual risk. Interpersonal violence is a growing concern for youth survival and development in South Africa. Violence has been high in South Africa since apartheid, and the current rates of violence in South Africa are a legacy of the turbulent past wrought in South Africa (Norman et al., 2010).

Violence occurs in multiple forms, and the most prevalent kinds of violent acts in South Africa include physical and sexual assault (Seedat et al., 2009).

In terms of physical assault, approximately 3.5 million people seek health care for non-fatal injuries every year in South Africa (Seedat et al., 2009). A prevailing feature of violence in South Africa is the role of young men as perpetrators and victims of violence (Seedat et al.,

2009). The highest homicide victimisation rates are seen in males aged 15–29 years, at a rate of 184 deaths per 100,000 population, and in some areas such as in Cape Town the rate is higher (Seedat et al., 2009). More males die than females at a ratio of 7:1 (Seedat et al., 2009). However, in a survey administered in an antenatal clinic in Soweto, it was reported that 20% of females reported sexual violence by an intimate partner; further, sexual violence against children is also a common phenomenon (Seedat et al. 2009).

## **1.2 Problem statement**

Approximately 50% of youth in South Africa report having experienced sexual intercourse at the age of 16 or earlier, and about 80% are sexually active by the age of 20 (Eaton et al., 2003; Zuma et al., 2011). Early sexual debut and violence have both been identified as risk factors for adverse health and sociocultural outcomes among youth (McGrath et al., 2009). Furthermore, prior research has shown that sexual debut at an early age predisposes the individual to engaging in unprotected sex and having multiple sexual partners, both of which exacerbate the risk of HIV infection and unwanted pregnancy (Gupta & Mahy, 2002). Youth aged 15–24 years comprise 10% of all HIV infections in South Africa (Zuma et al., 2011).

Age at sexual debut has been linked to unplanned pregnancy, which predisposes women to having unsafe abortions. Approximately 35% of pregnancies among young people aged 15–19 years old were unplanned or badly timed, and about two thirds of these pregnancies result in unsafe abortions (Mchunu et al., 2012). Although termination of pregnancy at health institutions has been legalised in South Africa, these services are not easily accessed by all women, due to fear of being judged by health professionals. These women opt for alternative unsafe methods which contribute to maternal mortality and morbidity. Moreover, early sexual initiation has significant negative effects on adolescent females' education, which contribute to a lower future income and less empowerment for young girls (Gupta & Mahy, 2002;

Hindin & Fatusi, 2009). The literature shows that although young females are permitted to continue with their schooling after childbearing, only 30% of them go back to school, and of those who continue with their studies, the majority have to repeat a grade and encounter challenges with furthering their studies to tertiary level as they have the responsibility of providing for the child (Monica et al., 2008; Matthews et al., 2009; Mchunu et al., 2012)

With homicide age-standardised rates of 68 per 100,000 and a prevalence rate of 184 per 100,000 for males aged 15–29 years old, South Africa still has the highest rate of violence in the world, even though it has reduced since the emergence of democracy. In 2000 violence caused about 6.5% of all disability-adjusted life years (DALYs), and accounted for over 30% of all deaths (Seedat et al., 2009; Norman et al., 2010).

Further, violence among the youth leads to negative education outcomes in South Africa. Research has shown that school violence causes mental health problems among individuals who have been victimised. Cases of depression and fatigue have been linked to school violence in South Africa; these problems lead to absenteeism of learners, impacting on school performance and ultimately leading them to drop out of school (Cooley-Strickland et al., 2009; Burton & Leoschut, 2013).

Sexual coercion and violence have been identified as determinants of early sexual debut. However, other forms of violence, such as physical assault, have not been examined in relation to early sexual debut. Research is needed to examine these relationships. Studies that have shown the link between early sexual debut and sociocultural factors such as the socio-economic status and geography of the individual found that sociocultural factors are the leading causes of sexual coercion and violence, and of multiple partnerships with older men. All of these have been found to be causes of early sexual initiation (Gupta & Mahy, 2002).

Studies have focused on linking early sexual debut and intimate partner violence as well as sexual violence (Peltzer, 2006). Results from these studies prove that in many instances sexual coercion, intimate partner violence and early sexual debut are related, yet no study has looked at how or whether physical assault is associated with early sexual debut. Secondly, in studying early sexual debut many studies focus on the adolescent females, neglecting males. This study aims to examine how physical assault, working through cognitive and emotional factors such as self-esteem, can be associated with age at sexual debut.

### **1.3 Justification**

Interpersonal violence and age at sexual debut are both important factors in young people's development. Age at sexual debut is an indicator of risky sexual behaviour as it contributes enormously to HIV infection and unplanned pregnancy among the youth (Zuma et al., 2011). Young people have the fastest-growing infection rates, and monitoring early sexual debut has become increasingly important for the survival of youth in the context of the climbing rates of HIV/AIDS (Mchunu et al, 2012).

Sub-Saharan Africa faces by far the highest rate of HIV infections. Although this region accounts for only 10% of the world's population, 85% of AIDS deaths have occurred here (Eaton et al., 2003). Sexual debut at young ages may set a precedent for future behaviours, such as having multiple sexual partners and inconsistent condom use, which elevate HIV risk. Therefore preventative interventions may be most effective if directed at young people who are still in earlier age groups (Eaton et al, 2003; Mchunu et al, 2012).

Similarly, violence has been reported to be most prevalent among the youth in the 15–29 age bracket, and incidences of violence are reported more among males than females in this age group. The survival of our youth is essential to the country's future well-being, as they will determine the economic productivity and reproductive health of South Africa. Young people

are growing up in a fast-changing world that offers them greater access to formal education, which exposes them to increasing technology, skills, job opportunities, and exposure to new ideas through media, telecommunications and other avenues. For that reason a study that looks at the association between violence and early sexual debut is desirable, as research has shown that both factors can be detrimental to the development of adolescents and young adults if they are unmonitored (Mensch et al., 2006). Interventions such as Life Orientation as part of the curriculum at schools and the loveLife ‘Born-free dialogue’ are important strategies in trying to delay the age at which young people start to have sexual intercourse (Harrison et al, 2010).

Anti-violence campaigns that have been initiated have, for the most part, the best interests of women and children at heart, neglecting males. Initiatives such as the 16 Days of Activism for No Violence against Women and Children, and policies such as those expressed in the Domestic Violence Act (Act 116, 1998) also protect women and children, neglecting males. This study will add a systematic analysis by drawing on previous literature that focuses on males as victims of violence, to advise policy-making.

The current study looks at how the development and reproductive health of youth in South Africa may be compromised, by examining whether there is an association between violence and early sexual debut among young people who are the future leaders, parents and main source of revenue for South Africa.

#### **1.4 Research question**

What is the relationship between violence and early sexual debut among youth in South Africa?

#### **1.5 Research objectives**

##### **1.5.1 General objective**



To examine the association between violence and early sexual debut among youth in South Africa.

### **1.5.2 Specific objectives**

1. To determine the levels of early sexual debut among youth in South Africa.
2. To examine the relationship between physical violence and early sexual debut, controlling for other socio-economic and demographic factors, and cognitive factors.

### **1.6 Definition of terms**

**Early sexual debut:** An act of engaging in sexual intercourse at any age that is below 16 years old, as supported by the Sexual Offences Act (Act 32, 2007) in South Africa. The law prescribes the age of consensual sex as 16 years. Anyone who has sexual intercourse with anyone below this age will be considered to have committed statutory rape.

**Unintended pregnancy:** A pregnancy that is mistimed, unplanned, or unwanted at the time of conception (Tsui et al., 2010).

**Adolescence:** A transitional stage of physical and psychological human development, with a general defined age of 10–19 years; it is a critical transitional phase to adulthood (Clark & Mathur, 2012).

**Youth:** In South Africa, the youth are defined as individuals who are 14–35 years old. This is based on the mandate of the National Youth Commission Act 1996 and the National Youth Policy 2000 (National Youth Policy 2014–2019). However, for the purpose of the study, the youth will be defined as individuals who fall in the age group 16–24 years old.

**Interpersonal violence:** The use of physical force against another person that ultimately results in injury or death (Norman et al., 2007).

## **Chapter 2: Literature review**

### **2.1 Literature review**

The following section draws from previous literature, providing a systematic analysis of the levels and trends of early sexual debut. It is divided into three sub-sections, namely: global context of age at sexual debut, age at sexual debut in sub-Saharan Africa, and the context of early sexual debut in South Africa. Following this, the chapter also discusses the conceptual framework used by the study. The conceptual framework is adapted from the social cognitive theory established by Albert Bandura in 1979. The theory will be further discussed later in this chapter.

#### **2.1.1 Global context of age at sexual debut**

Early sexual debut is a public health concern that exposes youth to the danger of being infected with STIs, particularly HIV, when the participants do not take adequate precautions. This also leads to prolonged risky sexual behaviour. Early sexual initiation contributes to unwanted pregnancies among young females, which may have negative effect on the education outcome of these females (Cavazos-Rehg et al., 201).

Studies have also shown that the nature and context of sexual debut among youth has changed. Up until the late 1950s, sexual debut took place in the context of marriage, and premarital sex was frowned upon. The rationale for this was to preserve the good name of the girl's family, and preservation of girls' virginity was also encouraged to limit children born out of wedlock (Mensch et al., 2006). Industrialisation brought with it a global economic change that affected the lifestyle of communities and how culture guides peoples' morals. Previously culture had played a significant role in putting strict restrictions on young people's

sexual conduct, as it required sexual intercourse to be initiated within the confines of marriage. This rule was most instilled in the behaviour of females (Finer, 2007).

However, today young people grow up in conditions quite different from those of their parents. Furthermore, the prevalence of STIs is much higher in the present day; before the advent of HIV and AIDS, young people were the least-diseased population group. This changed. In 2006 up to 40% of all new HIV infections were among young people aged 15–24 years (Moore et al., 2007).

According to a study by Mensch et al. (2006), risky sexual behaviour creates a platform for unwanted pregnancies and STIs because people are more frequently having sex outside the confines of marriage, and as a result multiple sexual partners are easily tolerated. Early sexual debut alone does not stand as risky sexual behaviour; it only becomes risky if young people engage in sexual intercourse without the use of contraceptives and when they have more than one casual sexual partner.

A study that examined sexual initiation among students in China found that the rates of sexual debut have changed in that country since the start of its open-door policies. In the 1970s the attitudes and sexual conduct of people changed to an extent that sexual debut out of wedlock became permissible. Although the rate of early sexual debut may be regarded as low compared to those shown in developing countries, it has increased rapidly over the last three decades, thus leaving young people susceptible to STIs and unplanned pregnancy (Ma et al., 2009).

In a study that observed trends in premarital sex in America over the period 1950–2003, it was found that early sexual initiation has been rising over the years. Finer (2007) shows that between 1954, at the time early marriage was decreasing, and 2003, the rate of early sexual debut (sexual debut by the age of 15) increased by 10%. This rise is attributed to an increase

in sexual debut before marriage among American youth. The study shows that the context of sexual debut changed around 1950 in America, which led to an observed decrease in the age at sexual debut. More recently, 70% males and 65% females reported sexual debut before the age of 17 (Finer, 2007). However, a study by Cavazos-Rehg et al. (2009) found that the rate of early sexual debut among Americans between the ages 14–19 has remained consistent since 1997. According to this study approximately 7.1% of American youth report sexual debut at the age of 13, and by the age of 16, 64% report having experienced sexual debut, with this rate increasing to about 70% by the age of 18 (Cavazos-Rehg et al., 2009).

Research shows that the early sexual debut in America is prompted by risky behaviours such as drug and alcohol use. A study by Armour and Haynie (2007) shows that individuals who used drugs and alcohol had a higher likelihood of sexual initiation at an early age, moreover, those who had early sexual debut had a higher likelihood of developing risky behaviours later in life. Selikow et al. (2009) argue that negative peer pressure from friends may result in these high-risk behaviours, and during the phase of adolescence young people are more likely to be susceptible to socially prescribed norms as their peers' opinions are extremely important to them.

Furthermore, a study by Cavazos-Rehg et al. (2011) found that about 20% of youth reported alcohol consumption at sexual debut, which led to sexual intercourse being practised without a condom. The same study also found that individuals are at higher risk of initiating sexual intercourse at an earlier age in instances where a parent or both parents consume alcohol. The study showed that having alcohol dependent parents increases the risk of the individual experiencing sexual debut before the age of 15. It further argues that alcohol dependence among parents will limit the parents' supervision of their children, which ultimately leads to the individual seeking love, affection and a sense of belonging from peers, who in turn may

persuade them to early sexual debut and other risk behaviours, such as drug and alcohol use, as well as forgoing the use of condoms (Cavazos-Rehg et al., 2011).

In another study, by Moston and Ahrold (2010), it was found that the individual's environmental factors such as socio-economic status and the race of the individual had a great impact on the timing of sexual debut. The authors suggest that in the United States race plays a role in the timing of sexual debut, as it found that among all the racial groups included in the study, African-Americans had the highest rate of early sexual debut, followed by Hispanics, while the Asian population indicated the lowest (Moston & Ahrold, 2010). The different rates of early sexual debut across racial groups are attributed to the groups' differing social and cultural norms. According Cavazos-Rehg et al. (2009), African-American and the Hispanic parents are less likely to discuss sexuality with their children. This impedes on the transference of knowledge across generations, which prompts adolescents to seek knowledge from their peers (Cavazos-Rehg et al., 2009). The study also shows that the Asian population in the United States still retains many traditional norms and practices, and sexual intercourse is considered to be for marriage (Cavazos-Rehg et al., 2009; Moston & Ahrold, 2010). The timing of sexual debut differs by gender, as males were found to have experienced sexual debut before females in all the racial groups included in the study (Cavazos-Rehg et al., 2009; Moston & Ahrold, 2010).

### **2.1.2 Age at sexual debut in sub-Saharan Africa**

In the context of sub-Saharan Africa, industrialisation has been identified as a catalyst for early sexual debut. Industrialisation is a process of economic change, which transforms an agrarian society into an industrialised society. Moreover, it typically entails growth in the economy which involves prolonged schooling that goes well beyond puberty and offers equal access to school for both boys and girls (Peltzer, 2006). However the situation in sub-Saharan

Africa is different, as even though industrialisation took place, and the majority of young people have moved to urban areas, poverty is still prevalent in Africa and early sexual debut happens as a result of a poor wealth status (Mazengia & Worku, 2009; Oljira et al., 2012).

A study in Ethiopia found that approximately 25% of the adolescents included in the study reported sexual initiation before the age of 16, with 79% reporting sexual initiation by the age of 18. The age of sexual initiation and the age at sexual debut overlapped, particularly among females (Oljira et al., 2012). Another study found that young females in Ethiopia first experience sexual intercourse at early age. Sexual debut had occurred for approximately 32% of the youth included in the study before the age of 15, with the percentage escalating to 65% before age 18. The rate of early sexual debut for most females in Ethiopia is driven by early marriage, with the median age at marriage in Ethiopia being 16 years (Mazengia & Worku, 2009).

A study that examined sexual practices among youth aged 10–19 years in Tanzania indicated that their sexuality and sexual behaviours are influenced by the social and cultural context of the country or group of interest. Just over 30% of youth included in the study indicated that they are sexually active, with a notable increase in the rate of sexual initiation in Tanzania (Kazaura et al., 2009). A study that examined sexual activity among youth in Kenya found the self-reported median age at sexual debut to be 16 in Nairobi, and another study, which looked at predictors of sexual debut among youth who stay in slum areas in Kenya, found that approximately 85% of youth in the sample reported sexual debut by the age of 16, with 15% of the females reporting sexual coercion (Beguy et al., 2009; Kabiru & Cleland, 2013).

A study that looked at sexual behaviour of adolescents in sub-Saharan Africa indicates that the normal age of sexual debut in sub-Saharan Africa is 15–19 years. However, in some countries, such as Uganda, the age at sexual debut is steadily on the rise (Doyle et al., 2012).

Results from a study show that the median age at sexual debut among those born between 1990 and 1994 (who are currently 26–22 years old) was 17 years, while the median age for those born ten years prior was about 19 years. Doyle et al. (2012) suggest that this delay in sexual debut resulted in a slight decline in the prevalence of HIV when comparing the two age groups. According to the authors, the increase in the age at sexual debut was a result of a widespread message of abstinence, which propelled Ugandan youth to delay sexual initiation until committing to stable sexual relationships. They further argue that these changes were enabled by a supportive social context, which instils the value of sexual intercourse initiated at a later age (Doyle et al., 2009). Another study, which examined the changes in timing of sexual debut among Christian and Muslim females in Nigeria, also found that the social context of the individual influences behaviour in this respect (Agha, 2008). According to the study, an erosion in traditional values influences the age at which young people may become sexually active. The study found that the age had declined mostly among Christians as compared to Muslims, the reason being that Christian participants in the study indicated less strict social control among Christians. This may sound contrary to expectation, but the decrease in age at sexual debut is attributed to liberal mores that came with higher rate of education that is supportive of sexual education at schools in the Christian community. Muslims are characterised by a stricter social control that instils the value of females marrying as virgins, and social interaction between young males and females is limited. This means that greater liberalisation has made scant difference to the behaviour in these communities over the years (Agha, 2008).

Approximately 70% of all young people live in developing countries and over 60 % of those in Africa have engaged in sexual intercourse by the time they are 18 years old (Hindin & Fatusi, 2009).

### **2.1.3 The context of early sexual debut in South Africa**

The point has been made above that youth who become sexually active from a young age are more likely to engage in risky sexual practices such as having multiple partners and are less likely to use condoms, due to peer influence and a lack of knowledge. Therefore determining average age at sexual debut is a key feature of identifying the extent to which the context of sexual risk can be changed to reduce the incidence of HIV, unwanted pregnancies, and other social problems that arise from early sexual initiation. By extension, identifying trends in the timing of sexual debut is an important element in providing guidance on what strategies need to be implemented to curb the high rates of HIV and unwanted pregnancies among young people (Zuma et al., 2011).

According to Timaeus et al. (2015), South Africa is considered an industrialised country as most of its economy is driven by production other than agriculture. Other factors that are a product of industrialisation and are indicative of it include a decrease in fertility rate and access to education. Timaeus et al. (2015) argue that the teenage fertility rate in South Africa is lower than in most African countries, and the 2008 National Income Dynamics Study (NIDS) shows no significant differences between boys' and girls' school enrolment.

However, development and increase in education also encourages autonomy among young people, thus reducing parental control. This is synonymous with the development of a society that encourages premarital sex, producing an increase in adolescent sex and teenage pregnancy (Timaeus et al., 2015; Mensch et al., 2006).

At household level, poverty has been reported as a root cause of transactional sex among young people, especially females, which leaves them vulnerable to having unsafe abortions and to HIV infection (Gupta et al., 2003; Moore et al., 2007). Literature has indicated that young females who are from poor households use sexual intercourse to get financial assistance and gifts from their sexual partners, who are usually older and wealthier men



(Moore et al., 2007). Their poverty leaves them in a vulnerable position as these young females feel they do not have the power to negotiate safe sex, which exposes them to the risk of infectious disease and having unplanned and unwanted pregnancies (Gupta et al., 2003).

A study conducted in Kenya shows that poverty also contributes to early sexual debut through exposure to sexual intercourse from a young age. The study argues that children who grew up in slum areas and had to sleep in the same bedroom as their parents tended to experience sexual intercourse at a younger age (Madise et al., 2007).

First sexual experiences are part of the transition to adulthood, and they are influenced by the environment, context and culture in which young people develop.

Constructed social norms that define gender create an imbalance in sexual relationships among young people. Successful masculinity is defined when men have multiple sexual partners and do not use a condom during sexual intercourse (Gupta & Mahy, 2003). Young men are pressured to adhere to these social constructs, thus placing women in danger of high-risk consequences, which include, among others, contracting STIs such as HIV (Marston et al., 2013). On the other hand, women are socialised to be submissive to men, while men are socialised to have power over women. Relationships thus become a characterisation of this imbalance, where women do not possess the power to refuse sexual intercourse or negotiate safe sex, and men resort to violence if a woman tries to do either (MacPhail & Campbell, 2001). Furthermore, females are not encouraged to have open discussions about sexual intercourse unless they are married, and as a result young females are unlikely to learn and acquire knowledge from peers and adults (Marston et al., 2013).

The literature shows that education enrolment works as a determinant of early sexual debut in two opposing ways. It can either work as a buffer against early sexual debut, or the time spent at school may increase the odds of young people engaging in sex.

Through the acquisition of knowledge from teachers and peers, school attendance tends to delay sexual debut among adolescents. The school staff and peers play an important role in young people's schooling experience and in how the experiences will be relevant for subsequent transition into adulthood.

However, as stated above, research also indicates that time spent at school may encourage early sexual debut. Spending time with older learners who are sexually active might encourage adolescents to become sexually active too, thus diminishing the protective role that schools supposedly play in delaying sexual intercourse among young people (Lam et al., 2013).

In turn, early sexual debut has been reported to have negative effects on school performance and continued attendance. Although South African policy allows for teenage mothers to return to school, researchers argue that becoming a mother while still in school delays the teenage mother's educational progress (Timaheus et al., 2015). Teenage motherhood is also implicated as central to young mothers failing grade 12, which is a precondition for access to tertiary education and becoming financially independent. Teenage pregnancy is increasingly seen as problematic, as it may have negative consequences for girls' education and for the teenage mother and child's future well-being (Timaheus et al., 2015).

In addition, a study conducted in Kenya shows that individuals who delayed sexual debut performed better at school than those who were already sexually active. This finding concurred with findings from a study in South Africa which indicated that learners who did well in their standardised exams were more likely to put off sexual debut, suggesting that school enrolment and performance at school matters more to them (Clark & Mathur, 2012).

Place of residence is also among the determinants of age at sexual debut. Early sexual debut is more widely reported in urban areas than in rural areas. This is understood to be because

urban social networks and lifestyle offer fewer restrictions on sexual behaviour, and people's cultural values are subject to change in urban areas (Peltzer, 2006). Conversely, a study in South Africa indicated that young people who live in rural areas engage in sexual intercourse much earlier than those who live in urban areas. However, adolescents who live in urban areas indicated frequent sex, due to external motives for the first sexual intercourse, which is propelled by peer pressure, and in most cases sexual activity takes place under the influence of drugs and/or alcohol (Peltzer, 2006).

In his study, Peltzer (2006) investigated the correlation between the length of time lived in an urban area and adolescents' risk behaviour in black communities in the Cape Peninsula. The study found that alcohol and the use of weed (marijuana) were associated with urbanisation. Another factor influencing early sexual behaviour is that fertility is an important part of proving one's femininity according to the culture of these communities. This has also been cited as a primary reason for adolescent sexual intercourse and non-use of contraceptives. Similarly, among male adolescents, early fatherhood is a welcome affirmation of masculine maturity and strength (Pettifor, 2006).

Early sexual debut and sexual violence are both heavily influenced by cultural sexual norms, and this is why early sexual debut is often forced. Also, females who experience childhood sexual abuse are more likely to experience consensual sex for the first time earlier than their peers who have do not have this misfortune, due to the lasting cognitive and emotional effects the sexual abuse had on them.

Physical violence is high in South Africa, especially violence against females: over 40% of males have admitted to having been violent towards a woman. Patriarchal social norms influence the use of violence by men to discipline and control female partners. So long as boundaries of severity are not transgressed, violence is viewed as socially acceptable.

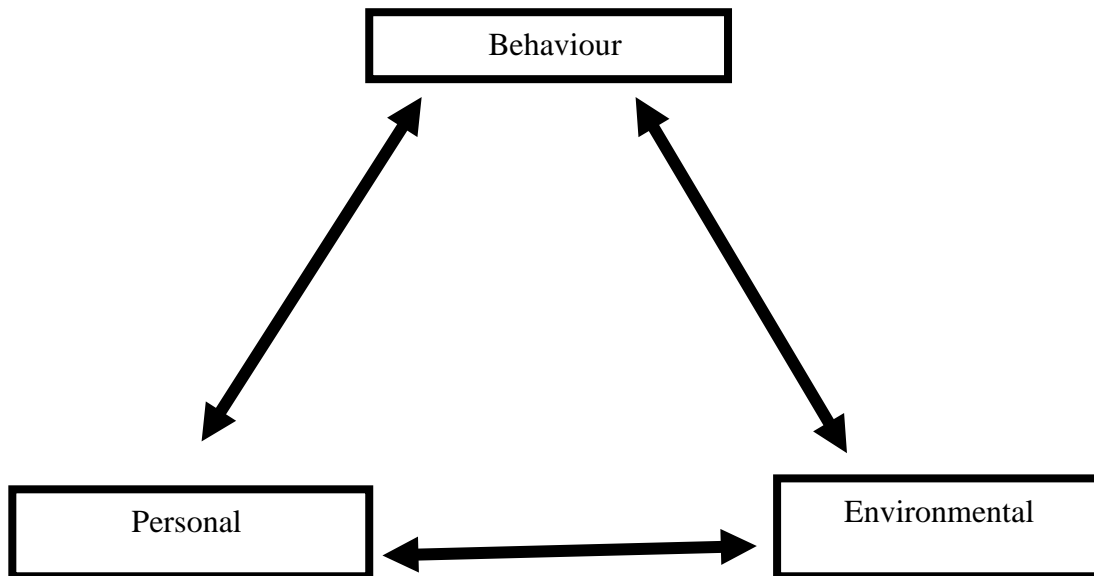
Poverty and inequality create crucial social dynamics that have contributed to the extent of violent behaviour prevalent in South Africa (Seedat et al., 2009). They are inseparably related to other key drivers such as the dominant patriarchal constructions of masculinity, as well as alcohol and drug misuse (Seedat et al., 2009). Violence and poverty were propelled by apartheid and the unequal distribution of social and economic benefits it engendered. Since apartheid, income inequality, low economic development, and high levels of gender inequity have become strong positive predictors of violence, including homicides and major assaults (Seedat et al., 2009).

## **2.2 Theoretical framework**

The social cognitive theory was adapted from the social learning theory by Bandura in 1986. Social cognitive theory posits that learning is a flexible process that takes place in a social context, and is influenced by a reciprocal causation among behaviour, cognitive and personal influences, and environmental influences (Bandura, 1986). It is worthy to note that the different factors do not have the same strength; some may be stronger than others. Furthermore, the social cognitive theory considers the individuals' ability to influence, maintain and regulate their own behaviour and environment through self-reflection and self-regulatory processes (Bandura, 1986).

Below is a diagram depicting how the environmental, behavioural and personal factors work together in a triad process.

Figure 2.1: Bandura (1986) Social cognitive framework



Correspondingly, the current study will look at how personal and cognitive influences and environmental factors influence the individual's behaviour.

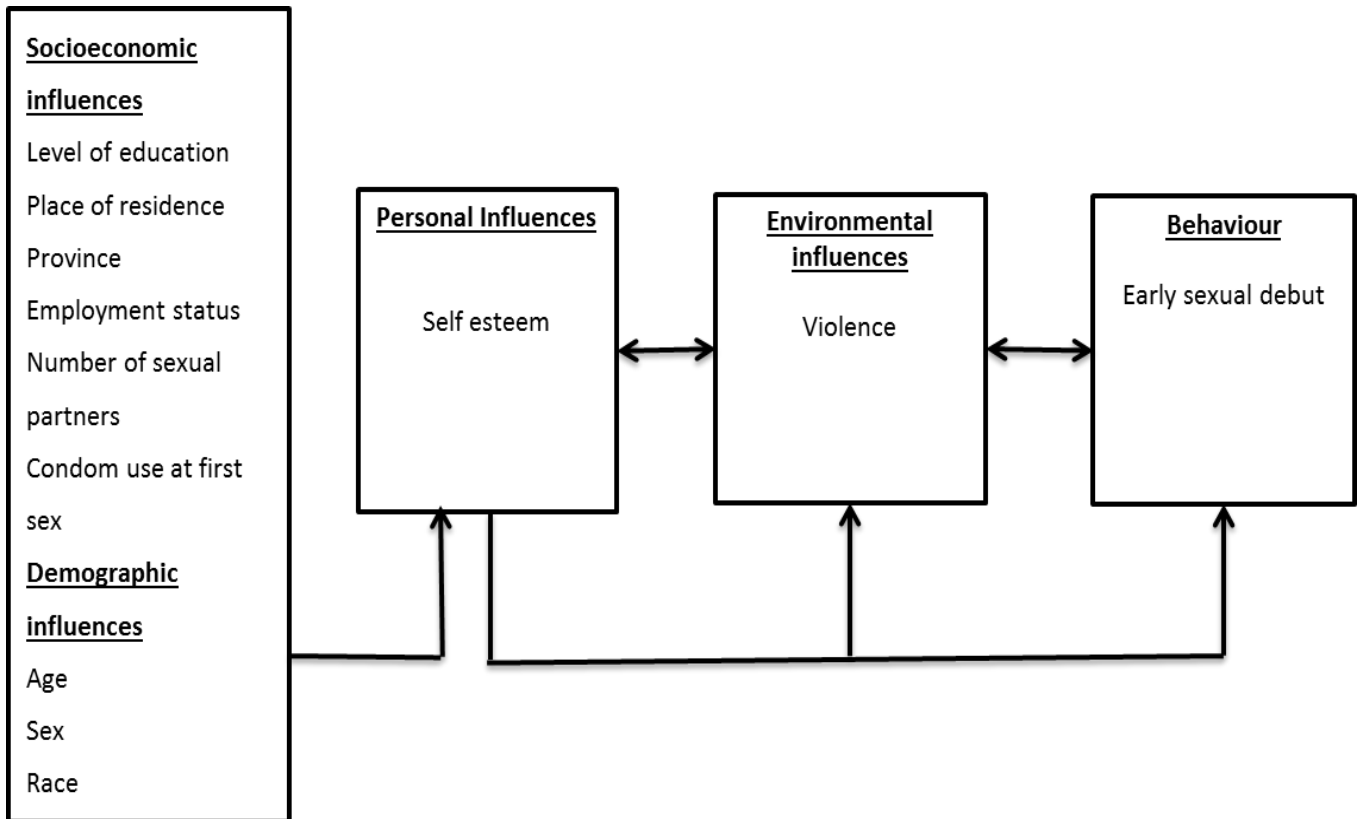
### **2.3 Conceptual framework**

The study will use a framework adapted from the social cognitive theory; the nature of the current study requires that a few important aspects be taken into account. The adapted framework will show pathways going in a linear and a reciprocal direction, ultimately working together to influence behaviour. Secondly, as the literature has shown that socio-economic and demographic factors are unavoidable predictors of early sexual debut, the study will show the role played by the socio-economic and demographic pathways (Gupta & Mahy, 2002).

The direction that this framework will take is that the socio-economic and demographic factors work together to influence the personal and cognitive influences, which will have a direct influence on the environmental influences (violence) and the behavioural factors.

Furthermore it is worthy of note that the environmental and behavioural pathways will work in a reciprocal direction in the current study.

Figure 2.2: Conceptual framework adapted from Bandura (1986) social cognitive theory



## **Chapter 3: Methodology**

The methodology section will give an overview of the process followed to obtain the required results.

### **3.1 Study area**

South Africa is a country located on the southern tip of the African continent; it is home to 51.8 million people. The country's black population constitutes 81%, followed by the coloured (9%), white (8%) and Indian/Asian (3%) populations.

The country has a turbulent history of apartheid. Prior to 1994, South Africa was under the rule of a government that implemented racial segregation, and all except the white group were subject to discrimination. In 1994, a new democratic system was voted in, which allowed equal rights for all human beings, and currently South Africa is governed under a new constitution which was adopted in 1996 (Cooley-Strickland et al., 2009).

According to the 2015 mid-year estimates, the total HIV prevalence rate was 11%, with a rate of approximately 6% among the 15–25 age group. The most infected are women of reproductive age (15–49 years), with a prevalence rate of about 19%.

### **3.2 Study design**

The current study utilised a cross-sectional survey from the National Communication Survey 2012. Data collection was conducted in three stages. In the first stage, a sample of 400 primary sampling units (PSUs) was collected from the Statistics South Africa 'sub-places'. These sub-places are categorised by Statistics South Africa as small areas located within and making up the main areas. For this study, they were randomly selected from all nine provinces, with a sample size proportional to the population size of each province. However,

Northern Cape, being the smallest province by population, was over-sampled; this was to ensure that it yielded results that could be generalised across the province.

In the second stage a systematic sampling approach was used. This involved selecting households within the PSUs. The number of households selected was calculated proportional to the size of the sub-places.

The final stage, stage three, involved the selection of eligible individuals from within the households to be interviewed using the KISH Grid method. This is a sampling tool formed by Leslie Kish and it is used for random sampling in households. This tool is a table that lists the members of each household with the aim of giving each sampling unit within each household an equal probability of being selected. The National Communication Survey defined household membership according to the number of nights spent at the household in a year (Johnson et al, 2013).

### **3.3 Study population and sample size**

The population of interest are males and females between the ages 16–24, who have experienced sexual intercourse. The overall weight population size of males and females in this age group is 4,290,056 and 4,586,167 respectively; however, due to the restrictions in the inclusion criteria the sample size was reduced to 1,873,956 (67.14%) females and 932,397 (32.86%) males.

### **3.4 Questionnaire design**

The questionnaire was designed to measure the respondent's key characteristics, which may have an effect on how responsive they are to HIV communication, exposure to HIV campaigns, and risk behaviours, as well as care and support behaviours (Johnson et al., 2013).



### **3.5 Dependent variable**

The dependent variable (DV) is early sexual debut, and it is divided into three categories. The groups are categorised based on the understanding that reproductive health behaviour differs across the different age groups.

The first category consists of individuals who had sexual intercourse before the age of 16, which is considered to be early sexual debut in the study. The second is composed of individuals who had sexual initiation between the ages of 16–19, and the last of individuals who first had sexual intercourse between the ages of 20–24.

Table 3.1: Outcome variable – age at sexual debut

Outcome variable	Description	Categories
Age at sexual debut	“How old were you when you first had sex with someone?”	1) Sexual debut $\leq$ 15 years 2) Sexual debut at 16–19 years. 3) Sexual debut at 20–24 years.

### **3.6 Independent variables**

The independent variables (IVs) selected are socio-economic and demographic variables that describe the characteristics of the respondents, and each variable was selected based on its relevance to the population of interest.

The main independent variable is violence; this refers to whether the respondent had experienced violence in the previous 12 months. It is divided into two groups, namely individuals who had and those who had not. In the questionnaire the question pertaining to this asks if the respondents had been beaten in the previous 12 months. The variable was used exactly as it is in the questionnaire.

The socio-economic variables describe the social and economic characteristics of the respondents, these include the respondent's level of education, province, place of residence, socio-economic status, employment status, condom use at first sex, and the number of sexual partners to date.

### **Variable recode**

The variable level of education measures the respondent's highest grade of education and the variable is saved as 'educat' in the questionnaire. It initially consisted of five categories, namely: no education, up to primary, up to grade 11, matric, and tertiary; however the variable was collapsed to three categories. It was recoded in the following manner: 'no education' and 'up to primary' were combined to form one category, and the categories 'up to grade 11' and 'Matric' were also combined. This reduced the categories to three.

The variable 'province' was used in its original form. The variable describes the province that the respondent lives in, and provides a list of all nine provinces in South Africa.

The variable 'place of residence' examines whether the respondents live in an urban setting or a rural setting. The variable was renamed to 'POR' and was not recoded.

Socio-economic status measures the respondent's socio-economic bracket, the options being that the respondent is from a poor household, a middle-income household or a rich household. The variable is as found in the data form, as no altering was needed.

In this paper employment status is used as a dichotomous variable, measuring whether the respondent is employed or unemployed. In its original form the variable has four categories, which are unemployed, employed, student and other.

Condom use at first sex examines whether the respondent used a condom at sexual debut, the variable is dichotomous, with the responses 'yes' and 'no' indicating that they used a condom or not.

In measuring the number of sexual partners the respondent had had, the variable was categorised into 'one partner' and 'multiple sexual partners', the latter category ranging from two to four.

The demographic variables describe the demographic characteristics of the respondents: race, sex and age. These were used in the following manner:

In its original form the variable of 'Race' included 'Black', 'Coloured', 'White', 'Indian/Asian' and 'Other'. However, due to uneven distribution among the racial groups, the variable was divided into 'Black' and 'Other' (which includes all categories other than 'Black').

The binary variable 'Sex' examines whether the respondent is male or female. The variable was used in its original form; no recoding or renaming was done.

'Age' refers to the respondent's age at the time of answering the questionnaire. The variable is continuous.

All of the variables used in the study were obtained from the National Communications Survey, 2012.

Table 3.6: Independent variables used in the study along with their categories

<b><u>Predictor variable</u></b>	<b><u>Description</u></b>	<b><u>Categories</u></b>
<b><u>Main predictor variable</u></b> Violence	“Have you ever been beaten up in the past year?”	Categories:  1) Yes  2) No
<b><u>Socio-economic variables</u></b> Level of education	“What is the highest grade of education you have completed?”	Categories:  1) up to primary school  2) up to secondary school  3) up to tertiary
Province	The province that the respondent stays in	Categories:  1) Gauteng  2) North west  3) KwaZulu-Natal  4) Limpopo  5) Free State  6) Mpumalanga  7) Northern Cape  8) Western Cape  9) Eastern Cape
Place of residence	The type of settlement the respondent stays in	Categories:  1) Urban  2) Rural

Socio-economic status	Respondent's socio-economic status	Categories: 1) Rich 2) Medium 3) Poor
Employment status	"What is your present employment status?"	Categories: 1) Unemployed 2) Employed
Condom use at first sex	"Did you use a condom the first time you had sex with someone?"	Categories: 1) Yes 2) No
Number of sexual partners	"How many different people did you have sex with in the past month?"	Categories: 1) One 2) More than one
<b><u>Demographic variables</u></b> Age	Present age of the respondent	Categories: 1) 16 2) 17 3) 18 4) 19 5) 20 6) 21 7) 22 8) 23 9) 24

Sex	Sex of the respondent	Categories: 1) Male 2) Female
Race	Race of the respondent	Categories: 1) Black African 2) Non-African
<b><u>Personal</u></b> Self-esteem	“I have a good self-efficacy of myself”	Categories: 1) Disagree 2) Agree

### **3.7 Hypotheses**

H0: There is no association between violence and early sexual debut among youth in South Africa

HA: There is an association between violence and early sexual debut among youth in South Africa

### **3.8 Ethical issues**

Data collected for the study is secondary in nature; the data used was collected by Health Development Africa. The current study does not carry any personal details of respondents and in this way anonymity is ensured.

### **3.9 Data management**

Data was managed using STATA 12, which is statistical software that is used for analysing and describing data.

### **3.10 Data analysis**

The data analysis was carried out in a way that will answer the objectives of the study. To answer objective 1, which is to determine the levels of early sexual debut among the youth in South Africa, frequency tables are used.

In answering objective 2, which aims to examine the relationship between physical violence and early sexual debut controlling for other socio-economic and demographic factors, a chi square test was used. The test was used determine whether these is a significant association between the predictor variables and early sexual debut (outcome variable) (Treiman, 2009).

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

The chi square is calculated by the formula:

At a multivariate level, a multinomial logistic regression model, which is an extension of a binary logistic regression, was used. The multinomial logistic regression model is suitable when the dependant variable is categorical and has more than two categories. The reference category of the study is ‘sexual debut at the age of 20–24 years old’; using this statistical technique the study established the log-odds of an individual having early sexual debut. Multinomial logistic regression assumes a linear relationship between the logit of the Independent variables and Dependent variables, and does not assume a linear relationship between the actual dependent and independent variables. More assumptions of the model include:

- Assumes a large sample
- Independent variables are not linear functions of each other
- Normal distribution is not necessary or assumed for the dependent variable
- Homoscedasticity is not necessary for each level of the independent variables

- Normally distributed description of errors is not assumed.
- The independent variables need not be interval level

The multinomial logistic regression model is calculated using the following equation:

$$P_{ij} = \frac{e^{X_{ij}\beta + Z_i\delta_j}}{\sum_{k=1}^J e^{X_{ik}\beta + Z_i\delta_k}} .$$

Where:

i = cases

J = categories

k = independent variables

(Treiman, 2009)



## **Chapter 4: Descriptive data analysis**

The following chapter presents the results of the study. The results are presented in a way that answers the objectives of the study using descriptive and inferential statistics.

**Figure 4.1: Percentage distribution of age at sexual debut of youth in South Africa, 2012**

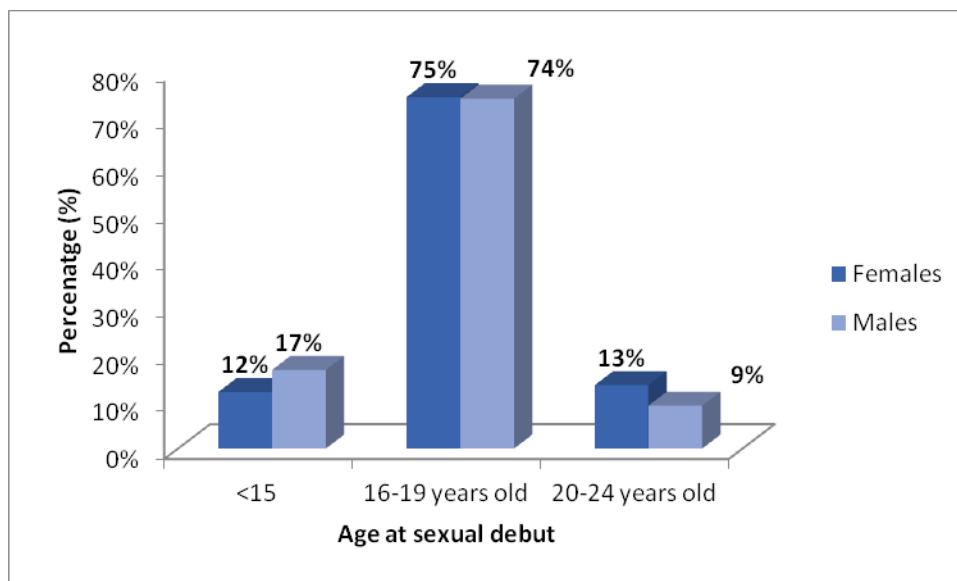


Figure 4.1 above shows the percentage distribution of age at sexual debut by sex among youth in South Africa. The results indicate that 12% of all the females in the sample and 17% of the males had initiated sexual intercourse before the age of 16. The corresponding figures for those who initiated sexual intercourse when they were 16–19 years old were 75% of the females and 74% of the males.

## 4.2 Levels of violence experienced

**Figure 4.2: Percentage distribution of violence experienced, by sex, among youth aged 16–24 in South Africa, 2012**

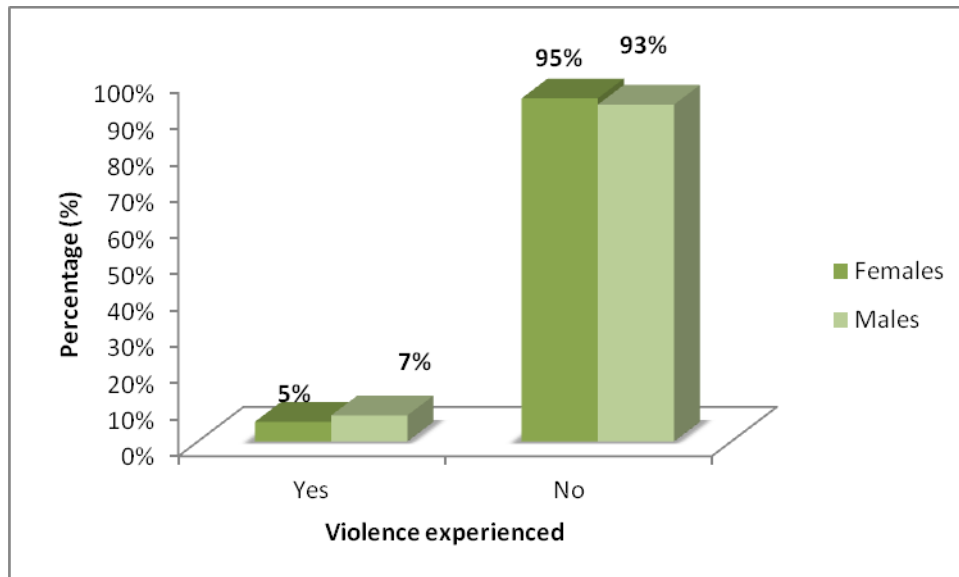


Figure 4.2 shows the percentage distribution of violence, by sex, among young people in South Africa. The results show that majority of youth (both male and female) reported no violence. Just 5% of the female sample reported having experienced violence, and 7% of the males.

**Table 4.1 Weighted frequencies and column percentage distribution of age at sexual debut by demographic and socio-economic characteristics of youth aged 16–24 years, South Africa, 2012**

Characteristics	Frequency	Percentage	
<b>Sexual debut</b>			
Sexual debut <15	498,496	13.69	
Sexual debut 16–19	2,710,701	74.42	
Sexual debut 20–24	433,025	11.89	
<b>Total</b>	<b>3,642,222</b>	<b>100</b>	
<b>Violence</b>			
Yes	216,244	5.94	
No	3,344,227	91.82	
No response	81,751	2.24	
<b>Total</b>	<b>3,642,222</b>	<b>100</b>	
<b>Race</b>			
Black African	2,905,118	79.76	
Non-African	737,104	20.24	
<b>Total</b>	<b>3,642,222</b>	<b>100</b>	
<b>Sex</b>			
Female	2,336,969	64.16	
Male	1,305,253	35.84	
<b>Total</b>	<b>3,642,222</b>	<b>100</b>	
<b>Age</b>			
	16	80,901	2.22
	17	156,032	4.28
	18	343,005	9.42
	19	477,473	13.11
	20	623,514	17.12
	21	518,121	14.23
	22	547,153	15.02
	23	496,231	13.62
	24	399,792	10.98
Total	<b>3,642,222</b>	100	
<b>Place of residence</b>			
Rural	1,479,803	40.63	
Urban	2,162,419	59.37	
<b>Total</b>	<b>3,642,222</b>	<b>100</b>	
<b>Level of education</b>			
Primary education	162,422	4.46	
Secondary education	3,113,486	85.48	
Tertiary education	366,314	10.06	
<b>Total</b>	<b>3,642,222</b>	<b>100</b>	
<b>Province</b>			

Western Cape	496,673	13.64
Eastern Cape	463,708	12.73
Free State	194,252	5.33
Gauteng	749,237	20.57
KwaZulu-Natal	772,211	21.20
Limpopo	351,979	9.66
Mpumalanga	288,546	7.92
North West	237,532	6.52
Northern Cape	88,084	2.42
<b>Total</b>	<b>3,642,222</b>	<b>100</b>
<b>Socio-economic status</b>		
High	1,220,274	33.50
Medium	1,247,460	34.25
Low	1,174,488	32.25
<b>Total</b>	<b>3,642,222</b>	<b>100</b>
<b>Employment status</b>		
Unemployed	3,091,896	84.89
Employed	550,326	15.11
<b>Total</b>	<b>3,642,222</b>	<b>100</b>
<b>Number of sexual partners</b>		
One	1,649,505	45.29
Multiple	1,992,717	54.71
<b>Total</b>	<b>3,642,222</b>	<b>100</b>
<b>Condom use at first sex</b>		
Yes	2,315,547	63.58
No	651,862	17.90
No response	674,813	18.53
<b>Total</b>	<b>3,642,222</b>	<b>100</b>
<b>Self-esteem</b>		
Disagree	113,718	3.12
Agree	3 528,504	96.88
<b>Total</b>	<b>3,642,222</b>	<b>100</b>

Table 4.1 shows that 6% of the respondents had experienced physical violence within the past 12 months, while 92% had not. These established levels of violence are a sharp contrast to what the previous literature has indicated.

In relation to the distribution of race, results show that black Africans make up the largest racial group (80%), while other racial groups constitute approximately 20%. Results further indicate that the majority of the respondents were females (64%), with males constituting

36%. In total, respondents who fall between the ages of 16–19 constitute 29% of the population, while those who fall in the age group 20–24 constitute 71%.

In addition, we find that 60% of the respondents are from urban areas (59%), while respondents from rural areas constitute 41%.

The majority of the respondents have at least secondary education (58%), according to these results. It would have been interesting to find out what the percentage of respondents was who had completed their matric. A further 10% of respondents indicated that they had received tertiary education.

Examining the results by province, we find that the Northern Cape constitutes the lowest percentage (3%), while Gauteng and KwaZulu-Natal contributed the highest number of respondents (both at approximately 21%). The majority of the respondents reported being from high-wealth-index households (38%), followed by respondents from middle-wealth-index households (36%).

Table 4.1 further indicates that a shocking 84.89% of respondents are unemployed; a plausible reason, however, is that some may be students at secondary or tertiary level. Be that as it may, only 15% of these respondents are employed. Another shocking result is that 55% of the respondents have had more than one sexual partner. This is of deep concern, considering the adverse outcomes multiple partners may have on an individual's health. More consoling is that 65% of respondents reported condom use at sexual debut. It is also gratifying to see that 97% of the respondents indicate high self-esteem.

**Table 4.2: Rates of age at sexual debut by demographic characteristics of youth aged 16–24 years, South Africa, 2012**

Characteristics	Total population	Sub-population	Estimated rates per thousand
<b>Violence</b>			
Yes	216,244	39,570	183
No	334,4227	450,630	135
<b>Sex</b>			
Female	2,336,969	280,636	120
Male	1,305,253	217,860	167
<b>Age</b>			
16–19	1,057,411	256,118	242
20–24	2,584,811	242,378	94
<b>Race</b>			
African	2,905,118	429,976	148
Non-African	737,104	68,520	93
<b>Place of residence</b>			
Rural	1,479,803	26,3050	178
Urban	2,162,419	235,446	109
<b>Condom use</b>			
Yes	2,315,547	264,511	114
No	65,1862	81,934	126

Table 4.2 above shows the rates by select demographic characteristics of youth aged 16–24 years in South Africa, calculated per 1,000 population.

These results indicate that the rate of young people who have experienced physical violence is 183 per 1,000 population. As previously reported, sexual debut before the age of 16 is more common among males, at a rate of 166 per 1,000 population, which is higher than the rate among females. Individuals of 16–19 years old have a higher rate of sexual debut before the age of 16, with a rate of 242 per 1,000 population. Results further show that black

Africans have a higher rate of early sexual debut than other racial groups, at 148 per 1,000 population. Individuals from rural areas have a higher rate of early sexual debut, at 178 per 1,000 population. Those who experienced early sexual debut and reported to have not used condoms constitute 125 per 1,000 population.

**Table 4.3: Frequency and percentage distribution of age at sexual debut by demographic characteristics of youth aged 16–24 years, South Africa, 2012**

Characteristics	<u>Sexual debut ≤15 years old</u>		<u>Sexual debut between 16–19 years</u>		<u>Sexual debut between 20–24 years</u>	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
<b>Violence</b>						
Yes	39,570	8.07	153,192	5.81	23,482	5.44
No	450,630	91.93	2,485,690	94.19	407,907	94.56
Total	<b>490,200</b>		<b>2,638,882</b>		<b>431,389</b>	
			<b>pvalue 0.000</b>			
<b>Self-esteem</b>						
Disagree	16,069	3.22	92,366	3.41	5,283	1.22
Agree	482,427	96.78	2,618,335	96.59	427,742	98.78
Total	498,496	100	2,710,701	100	433,025	100
			<b>pvalue 0.000</b>			
<b>Condom use at first sex</b>						
Yes	264,511	76.35	1,774,844	77.77	276,192	81.54
No	81,934	23.65	507,414	22.23	62,514	18.46
Total	346,445	100	2,282,258	100	338,706	100
			<b>pvalue 0.000</b>			
<b>Number of sexual partners</b>						
One	191,237	38.36	1,140,529	42.08	317,739	73.38
Multiple	307,259	61.64	1,570,172	57.92	115,286	26.62
Total	498,496	100	2,710,701	100	433,025	100
			<b>Pvalue 0.000</b>			
<b>Race</b>						
African	429,976	86.25	2,123,333	78.33	351,809	81.24
Non-African	68,520	13.75	587,368	21.67	81,216	18.76
Total	498,496		2,710,701		433,025	
			<b>Pvalue 0.000</b>			
<b>Sex</b>						
Female	280,636	56.3	1,742,093	64.27	314,240	72.57
Male	217,860	43.7	968,608	35.73	118,785	27.43
Total	498,496	100	2,710,701	100	433,025	100
			<b>Pvalue 0.000</b>			

<b>Province</b>						
Western Cape	71,721	14.39	382,640	14.12	42,312	9.77
Eastern Cape	69,631	13.97	341,315	12.59	52,762	12.18
Free State	20,117	4.04	141,801	5.23	32,334	7.47
Gauteng	85,779	17.21	576,719	21.28	86,739	20.03
KwaZulu-Natal	96,104	19.28	566,670	20.9	109,437	25.27
Limpopo	54,858	11	251,663	9.28	45,458	10.50
Mpumalanga	61,408	12.32	189,623	7	37,515	8.66
North West	37,968	7.62	189,067	6.97	10,497	2.42
Northern Cape	910	0.18	71,203	2.63	15,971	3.69
Total	498,496	100	2,710,701	100	433,025	100
			<b>pvalue 0.000</b>			
<b>Place of residence</b>						
Rural	263,050	52.77	1,067,745	39.39	149,008	34.41
Urban	235,446	47.23	1,642,956	60.61	284,017	65.59
Total	498,496	100	2,710,701	100	433,025	100
			<b>pvalue 0.000</b>			
<b>Level of education</b>						
Primary education	38,262	7.68	114,551	4.23	9,609	2.22
Secondary education	436,808	87.63	2,324,411	85.75	352,267	81.35
Tertiary education	23,426	4.7	271,739	10.02	71,149	16.43
Total	498,496	100	2,710,701	100	433,025	100
			<b>pvalue 0.000</b>			
<b>Employment status</b>						
Unemployed	455,714	91.42	2,338,091	86.25	298,091	68.84
Employed	42,782	8.58	372,610	13.75	134,934	31.16
Total	498,496	100	2,710,701	100	433,025	100
			<b>pvalue 0.000</b>			
<b>Socio-economic status</b>						
Low	128,658	25.81	917,031	33.83	174,585	40.32
Medium	180,432	36.2	927,382	34.21	139,646	32.25
High	189,406	38	866,288	31.96	118,794	27.43
Total	498,496	100	2,710,701	100	433,025	100
			<b>pvalue 0.000</b>			



Table 4.3 above shows the frequency and percentage distribution of age at sexual debut by select demographic and socio-economic characteristics of youth in South Africa. At a pvalue of 0.000, all of the predictor variables have a significant association with age at sexual debut, at bivariate level.

A large majority (92%) of respondents who experienced sexual debut before the age of 16 indicated that they had not experienced violence. A similar majority (97%) of those who initiated sexual debut before the age of 16 indicated a high self-esteem. Further, 76% of this group indicated that they had used condoms at sexual debut.

On the other hand, the majority (62%) of the group who experienced early sexual debut indicated that they had more than one sexual partner. In contrast, the majority (73%) of those whose sexual debut occurred between the ages of 20–24 have only one sexual partner.

The majority of the group (86%) who had experienced early sexual debut were African. At a bivariate level results also show that majority (56%) of respondents who began having sexual intercourse before the age of 16 are females. In relation to sexual debut across provinces, results show that majority of respondents who initiated sexual debut before the age of 16 are from KwaZulu-Natal (19%), followed by Gauteng (17%) and the lowest population is the Northern Cape (0.18%).

Early sexual debut was also prevalent among respondents from rural areas (53%). Majority (88%) of respondents who indicated early sexual debut had secondary education. In terms of employment status and socio-economic status, early sexual debut was most predominant among respondents who are unemployed (91%), while 38% of those who experienced sexual initiation before the age of 16 are from households with a high wealth status.

**Table 4.4 Unadjusted multinomial logistic regression showing individual predictor variables and age at sexual debut, South Africa, 2012**

Sexual debut before 16	RRR	Pvalue	95% CI	
<b>Violence (Yes)</b>				
No	0.6386831	0.32	0.2641057	1.544519
<b>Self-esteem (Disagree)</b>				
Agree	0.4862276	0.23	0.1497858	1.578369
<b>Condom use at sexual debut</b>				
No	1.166468	0.586	0.669936	2.031013
<b>Multiple sexual partners</b>				
Multiple	3.866098	0	2.515376	5.942137
<b>Province (Western Cape)</b>				
Eastern Cape	1.333333	0.511	0.5659721	3.141105
Free State	0.5777778	0.241	0.2307303	1.446829
Gauteng	0.6666667	0.287	0.3162937	1.405164
KwaZulu-Natal	0.4761905	0.036	0.2383154	0.9515012
Limpopo	0.8888889	0.768	0.4067574	1.942493
Mpumalanga	2.166667	0.114	0.8307477	5.650866
North West	2.222222	0.14	0.7699978	6.413358
Northern Cape	0.25	0.058	0.0596855	1.047155
<b>Level of education (Primary education)</b>				
Secondary education	0.287037	0.027	0.0950662	0.8666621
Tertiary education	0.0869565	0	0.023009	0.3286291
<b>Place of residence</b>				
Urban	0.5625	0.007	0.3694045	0.8565305
<b>Socio-economic status</b>				
Medium	1.147426	0.58	0.7049247	1.867699
Low	1.532234	0.108	0.9104525	2.578653
<b>Employment status (Unemployed)</b>				
Employed	0.2370103	0	0.1333744	0.4211745
<b>Race (African)</b>				
Non-African	1.241667	0.466	0.6941649	2.220994
<b>Sex (Female)</b>				
Male	2.079865	0.001	1.335634	3.238791
<b>Age</b>	0.4713852	0	0.4164602	0.5335539
<b>Sexual debut 16–19</b>				
<b>Violence (Yes)</b>				
No	0.7690751	0.496	0.3612609	1.637256
<b>Self-esteem (Disagree)</b>				
Agree	0.5934132	0.326	.2095754 1.680251	
<b>Condom use at sexual debut</b>				
No	1.068298	0.768	0.6880734	1.658633
<b>Multiple sexual partners</b>				

Multiple	3.027642	0	2.129994	4.303588
<b>Province (Western Cape)</b>				
Eastern Cape	1.193294	0.634	0.5763403	2.470676
Free State	0.6487179	0.235	0.3173961	1.325898
Gauteng	0.9190981	0.78	0.5077937	1.663552
KwaZulu-Natal	0.6619571	0.136	0.3847807	1.138797
Limpopo	0.7118437	0.303	0.3727908	1.359265
Mpumalanga	1.533654	0.324	0.6550929	3.590474
North West	1.504274	0.399	0.5826836	3.883478
Northern Cape	0.3525641	0.029	0.1386143	0.8967434
<b>Level of education</b>				
Secondary education	0.5524691	0.262	0.1957339	1.559373
Tertiary education	0.3516908	0.068	0.1147207	1.078153
<b>Place of residence</b>				
Urban	0.9217352	0.646	0.6511865	1.304689
<b>Socio-economic status</b>				
Medium	1.111589	0.588	0.758375	1.629314
Low	1.257569	0.286	0.8256349	1.915472
<b>Employment status (Unemployed)</b>				
Employed	0.3960497	0	0.2726447	0.5753105
<b>Race (African)</b>				
Non-African	1.244129	0.371	0.7711224	2.007278
<b>Sex (Female)</b>				
Male	1.302388	0.165	0.896991	1.891004
<b>Age</b>	0.5991861	0	0.5393794	0.6656243

Table 4.4 shows the unadjusted multinomial logistic regression, which predicts the relationship between individual predictor variables and the outcome (age at sexual debut). Results show that the variables ‘number of sexual partners’, ‘level of education’, ‘place of residence’, ‘employment status’, ‘sex’ and ‘age’ were significantly associated with age at sexual debut for the first base outcome (sexual debut before 16), while all other variables were insignificantly associated. For the second base outcome three variables were significantly associated, namely number of sexual partners, employment status and age.

Results show that the incidence of having sexual intercourse before the age of 16, as compared to sexual debut in the 20–24 age bracket, is 3.9 times higher for respondents who

have multiple sexual partners, than for those with only one sexual partner. The risk of sexual debut before the age of 16 is 0.029 times lower for respondents who have secondary educations, and 0.09 times lower for respondents who have tertiary education as compared to respondents with primary education. Respondents who reside in urban areas, as opposed to rural areas, are at 0.56 times lower risk of initiating sexual debut before the age of 16 as compared to sexual debut at the age 20–24. The risk of initiating in sexual debut before the age of 16, as opposed to sexual debut at 20–24, is 0.24 times lower for employed respondents than for respondents who are unemployed.

The incidence of sexual intercourse before the age of 16, compared to sexual debut at 20–24 years, is 2.08 times higher for males than it is for females.

The likelihood of having first experienced sexual intercourse at 16–19 years old, as opposed to in 20–24 years old, is 3.03 times higher for respondents who have multiple sexual partners than for those with only one sexual partner. Respondents who are employed are 0.39 times less likely to have first had sexual intercourse at 16–19 years old, compared to respondents who are unemployed. There is 0.60 less risk of initiating in sexual intercourse with every unit increase in the respondents age.

**Table 4.5 Adjusted multinomial logistic regression showing individual predictor variables and age at sexual debut, South Africa, 2012**

<i>Sexual debut before 16 (Outcome 1)</i>	<i>RRR</i>	<i>Pvalue</i>	<i>95% CI</i>	
<b>Violence (Yes)</b>				
No	0.3413593	0.107	0.0923399	1.261926
<b>Self-esteem (Disagree)</b>				
Agree	0.255625	0.117	0.046445	1.406915
<b>Condom use at sexual debut</b>				
No	1.590683	0.169	0.8205702	3.083554
<b>Multiple sexual partners</b>				

Multiple	7.404705	0.000	4.155882	13.19327
<b>Province (Western Cape)</b>				
Eastern cape	0.3846707	0.128	0.1122344	1.318416
Free State	0.1787577	0.013	0.0460682	0.6936306
Gauteng	0.3154978	0.04	0.1050581	0.9474647
KwaZulu-Natal	0.1536153	0.001	0.0517599	0.4559063
Limpopo	0.3731104	0.144	0.0993746	1.400874
Mpumalanga	0.7340049	0.648	0.1948823	2.764556
North West	0.5879319	0.508	0.1218659	2.836428
Northern Cape	0.0917453	0.016	0.0131482	0.6401771
<b>Level of education (Primary education)</b>				
Secondary education	0.2567311	0.142	0.0417168	1.579958
Tertiary education	0.2188219	0.153	0.027234	1.758211
<b>Place of residence</b>				
Urban	0.593919	0.183	0.275835	1.278807
<b>Socio-economic status</b>				
Medium	1.144785	0.702	0.5721469	2.290553
Low	1.058227	0.892	0.466971	2.398102
<b>Employment status (Unemployed)</b>				
Employed	0.4367819	0.037	0.2007528	0.9503152
<b>Race (African)</b>				
Non-African	1.387125	0.536	0.4917275	3.912973
<b>Sex (Female)</b>				
Male	2.03246	0.018	1.126777	3.666114
Age	0.3735431	0.000	0.3151586	0.4427435
<b>Sexual debut 16–19</b>				
<b>Violence (Yes)</b>				
No	0.4631772	0.186	0.1479858	1.449687
<b>Self-esteem (Disagree)</b>				
Agree	0.3265337	0.117	0.0804667	1.325072
<b>Condom use at sexual debut</b>				
No	1.26487	0.37	0.7568596	2.113861
<b>Multiple sexual partners</b>				

Multiple	4.993984	0.000	3.191215	7.815168
<b>Province (Western Cape)</b>				
Eastern Cape	0.5240018	0.208	0.1915877	1.433171
Free State	0.3239395	0.031	0.116514	0.9006367
Gauteng	0.5319776	0.151	0.2246254	1.259876
KwaZulu-Natal	0.3849191	0.025	0.166658	0.8890223
Limpopo	0.4178905	0.107	0.1447084	1.206789
Mpumalanga	0.6294149	0.411	0.2086313	1.898867
North West	0.7557092	0.683	0.1969748	2.899338
Northern Cape	0.1682369	0.012	0.0418632	0.6760989
<b>Level of education</b>				
Secondary education	0.5158448	0.437	0.0971012	2.740397
Tertiary education	0.6463925	0.63	0.1093067	3.822486
<b>Place of residence</b>				
Urban	0.9378573	0.833	0.5165381	1.70283
<b>Socio-economic status</b>				
Medium	0.9742761	0.921	0.5809243	1.633972
Low	0.9890631	0.972	0.5338097	1.832574
<b>Employment status (Unemployed)</b>				
Employed	0.5698782	0.028	0.345587	0.9397378
<b>Race (African)</b>				
Non-African	1.384891	0.447	0.5987262	3.203339
<b>Sex (Female)</b>				
Male	1.286306	0.296	0.8019963	2.06308
<b>Age</b>	0.5047203	0.000	0.4380137	0.5815859

Table 4.5 shows the adjusted multinomial logistic regression. The model predicts the relationship between individual predictor variables and the outcome (age at sexual debut). Results show that the variables ‘number of sexual partners’, ‘employment status’, ‘sex’ and ‘age’ were significantly associated with age at sexual debut for the first base outcome (sexual

debut before 16), while all other variables were insignificantly associated. For the second base outcome, three variables were significantly associated, namely the 'number of sexual partners the respondent has', 'employment status' and 'age'.

Results show that the incidence of having sexual intercourse before the age of 16, as compared to sexual debut at 20–24 years, is 7.4 times higher for respondents who have multiple sexual partners, than for those with only one sexual partner. The risk of sexual debut before the age of 16 is 0.31 times lower for respondents who reside in Gauteng, 0.15 times lower in KwaZulu-Natal and 0.09 times lower in Northern Cape, all compared to respondents from the Western Cape. The likelihood of having experienced sexual debut before the age of 16, as compared to sexual debut at 20–24, is 0.24 times lower for employed respondents than for the unemployed. Males are 2.08 times more likely to have had sexual intercourse before the age of 16 than females. There is a 0.37 lower risk of having experienced sexual intercourse before the age of 16 with every unit increase in the respondent's age.

The risk of initiating sexual intercourse in the age group 16–19, as opposed to initiating sexual intercourse in the age group 20–24 years is 4.99 times higher for respondents who have multiple sexual partners than respondents with only one sexual partner. Respondents who are employed have 0.57 times lower risk of initiating sexual intercourse between the age group 16–19, compared to respondents who are unemployed. There is 0.50 less risk of initiating in sexual intercourse with every unit increase in the respondents age. The risk of sexual debut between the ages 16–19 is 0.32 times lower for respondents who reside in Free State, 0.38 times lower for respondents who live in KwaZulu Natal and 0.17 times lower for respondents who live in Northern Cape, all compared to respondents from the Western Cape.

## **Chapter 5: Discussion**

This chapter serves to consolidate and offer a higher-level summary of the main findings from Chapter 4.

The purpose of the study was to examine the association between violence and early sexual debut among youth. To achieve this, unadjusted and adjusted multinomial logistic regression were utilised, controlling for select socio-economic and demographic factors. The unit of analysis is youth in South Africa aged between 16–24 years old.

### **5.1 Violence and early sexual debut**

Violence and sexual debut are prevalent issues that pose a threat to the reproductive health and development of youth in South Africa. The main objective of the study was to establish an association between violence and early sexual debut, controlling for the demographic and socio-economic variables.

Results from the adjusted multinomial model show that interpersonal violence is not a significant predictor of early sexual debut. However, experiencing violence does increase the risk of initiating sexual debut before the age of 16. According to the results from this study, respondents who indicated that they had not experienced violence in the past 12 months had a 0.64 lower risk of engaging in sexual debut before the age of 16.

It is important to note this, as previous literature has indicated that violence is detrimental to the survival and development of young people. This is related to the results of the current study, as sexual debut before the age of 16 can be a threat to the reproductive health of the individuals concerned. It is important to note that the combination of both violence and early sexual debut can have dire consequences for young people in South Africa. A plausible reason for there being no significant association between violence and early sexual debut could be that the violence measured was limited to that which had occurred within the



previous 12 months, but the respondents could have experienced it prior to that. So this study is only reflective of the 8% of the respondents who indicated that they had experienced violence within the previous year, as results from chi square test of association show an association between violence and age at sexual debut.

## **5.2 Violence**

Violence poses a major threat to young people in South Africa. Injuries from interpersonal violence have been ranked as the third leading cause of death in South Africa, following deaths from HIV/AIDS and cardiovascular disease (Mayosi et al., 2012; Seedat et al., 2009). Previous literature attributes the reason for high rates of violence to the violent history of South Africa during apartheid. Poverty and inequality are crucial social dynamics that have contributed to the burden of violence and injuries in South Africa (Seedat et al., 2009). However, results from the study show contrasting evidence to what has been reported in previous literature. According to this study, interpersonal violence was not high among youth, as the majority (95%) indicated that they had not experienced it. The low reported incidences of violence can be attributed to several plausible reasons. Firstly, as pointed out above, respondents were asked about experiences of physical violence that had occurred in the previous 12 months. This limitation led to an inaccurate representation of the problem of violence among youth, as it does not reflect results of those who had experienced violence prior to that. Studies that reported higher incidences of violence reported rates of violence over a longer period of time. Secondly, the victims of violence may find it difficult to open up about their experiences if they are trying to forget and move on. Lastly, respondents may choose to not disclose that they have been victims due to fear of being further victimised.

According to Norman et al. (2007), violence is high among young people, especially males in the 15–29 age bracket. More than 30% of mortality in South Africa is a result of interpersonal

violence. The authors further found that interpersonal violence contributed to 6.5% of disabilities in South Africa, and was the second leading cause of death after HIV/AIDS (Normal et al., 2007). Results from the *National Schools Violence Study* indicate that approximately 6.3% of high-school learners had reported incidences of assault at school, and an increase in the reported cases of school assault was observed between 2008 (4.3%) and 2012 (6.3%) (Burton & Leoschut, 2013).

The results further indicate that the experience of violence is gendered, as more males (56.27%) reported having experienced violence than females (43.71%). This is in line with previous literature, which highlighted that young men of 15–29 years old are the most victimised, with a prevalence rate of 184 per 100 000 men in this age bracket (Norman et al., 2007). Results from the *National Schools Violence Study* also indicate higher rates of assault for males (7%) than females (5.8%) in schools (Burton & Leoschut, 2013). A plausible reason for the disproportional rates of violence is that males use force and power to assert authority and status by showing toughness and bravery in defence of their honour. With the high rates of unemployment, young men assert their power and status through the use of violence as means of resolving their differences with one another (Seedat et al., 2009).

In answering the second objective of the study, which was to examine the relationship between physical violence and early sexual debut controlling for other socio-economic and demographic factors, the results were calculated at a bivariate and multivariate level.

At a bivariate level all the variables included in the study are associated with early sexual debut.

### **5.3 Age at sexual debut**

Results from the frequency table indicate that the most prevalent ages for sexual debut were 16–19 years old (74%), with the lowest percentage coming from the age group 20–24 (12%).

Various studies that have examined this topic in South Africa report different ages at sexual debut among young South Africans. However, despite there being inconsistencies in the exact results, several studies have indicated that the median age at sexual debut in South Africa falls within the 16–19 age bracket (Zuma et al., 2011). The inconsistencies could be attributed to a social desirability bias and recall bias among respondents.

A study by Zuma et al. (2011) reported a median age at sexual debut of 18 years, for both sexes. Another study, Pettifor et al. (2009), found the median age to be 16 and a third study, McGrath et al. (2008), indicated that the median age at sexual debut in their sample was 18.5 years for males and 19.2 years for females. These results correlate with the results from the current study, and all suggest that the age at sexual debut in South Africa is higher than it is in other countries in sub-Saharan Africa.

Child marriage has been the main cause of young females experiencing sexual intercourse at earlier ages in many African countries. A study in Ethiopia found that approximately 32% of females currently aged 25–49 years old first experienced sexual intercourse at the age of 15, and 65% were sexually active by the age of 18, as a result of child marriage in that country (Mazengia & Worku, 2009). Peltzer, (2006) found that approximately 31% of youth in Eastern and Southern Africa had indicated sexual debut before the age of 16 years. In another study, Rwenge (2000) found that about 24.3% of youth in Cameroon reported having had sexual intercourse before the age of 15, with the figure rising to 55.2% for sexual debut at 15–17 years old. Approximately 20.5% reported sexual debut between 18–22 years old. Again, these results reflect the fact that child marriage plays a role in lowering the age at sexual debut in some sub-Saharan countries.

That child marriage is not practised in South Africa raises the age at sexual debut. However, this also gives rise to premarital sex being a common practice among youth in South Africa, thus increasing the risk of young people contracting STIs, such as HIV/AIDS.

#### **5.4 Sexual debut by sex**

In estimating the levels of early sexual debut by sex, this study found that 16, 12% of female and 17% of male respondents had intercourse before they turned 16. Sexual debut at 16—19 years old applied to 74% of the male respondents, and 75% of the females. These results correlate with results from Pettifor et al. (2009), which found that males tended to report earlier sexual intercourse than females. In their study Pettifor et al. found that 50% of males aged 15–19 years old had reported sexual debut before the age of 16 compared to 47% of females in the same age group. Similarly, Peltzer et al. (2006) found that sexual debut before the age of 15 years was higher among males (38.1%) than females (15.8%). A plausible reason, however, for males being more likely to report early sexual debut than females is that males feel more comfortable with reporting their age at sexual debut and discussing it as part of asserting their masculinity. Females, on the other hand, might be subject to name calling, possible discrimination and stereotyping if they freely disclosed and discussed their sexual debut (Peltzer et al., 2006; Harrison et al., 2005). This poses a threat to young females as, by not talking about their sexual behavior, they stand the risk of being ill-informed, which in turn predisposes them to HIV risk, teenage pregnancy, and subsequently illegal abortions due to fear of being ridiculed. The abortion increases the risk of maternal morbidity and mortality. All of this can also lead ultimately to the disruption of young females' education and creates a ripple effect of a disempowered generation of women (Gupta & Mahy, 2002).

Results from the chi square test show that there is an association between respondent's sex and age at sexual debut. Results from the multinomial logistic regression also reveal that a

respondent's sex is a predictor of sexual debut before the age of 16. This finding is in accordance with studies that have found a significant association between respondents' sex and the age sexual debut. A study that looked at early sexual debut among males and females in South Africa found that 50% of males had reported sexual debut before the age of 15, while 47% of females reported sexual debut before the age of 14 (Oljira et al., 2012). Results from the same study revealed that males are more likely to report earlier sexual debut than females, a suspected cause of the difference being differing cultural expectations for males and females

### **5.5 Self-esteem**

Results indicate that majority of the youth have high self-esteem and that it was higher among individuals who had sexual debut at older ages. Individuals who reported their sexual debut to have taken place when they were 20–24 years old showed the highest percentage of high self-esteem (96.53%), followed by those who first had sex at 16–19 years old (95.07%). The lowest percentage of respondents reporting high self-esteem (93.72%) came from those who had sexual debut below the age of 16. Although these levels are generally high, the results do show a trend. During adolescence the need for belonging/ being accepted into a social group is stronger than in any other stage. Adolescents seek autonomy away from their parents, and are prone to follow what is being done by their peers. It is therefore at this stage that negative peer pressure is likely to promote risky sexual behaviour, as their peers' opinions are important. Self-esteem is closely tied with the individual's need to belong in a social group, and this comes with individual conforming to the standards set by the group, which may involve conforming to the pressure of being sexually active at young ages (Selikow et al., 2009). Secondly, by seeking approval and affirmation from their peers young people are more likely to engage in risks such as not using condoms and having multiple sexual partners (Marston et al., 2013).

### **5.5 Condom use at first sex**

The use of a condom at first sex is significantly associated in the results presented here with age at sexual debut (pvalue 0.000). According to these results, individuals who initiated sexual course at younger ages were at more risk of not using condoms at sexual debut. Harrison et al. (2005) argue that young people who experience sexual intercourse before the age of 15 are both more likely not to use condoms at sexual debut and more likely to have multiple and casual partners. This is because at this age they are not ready for it, and have not acquired enough knowledge on precautions that they need to be aware of when having sexual intercourse (Harrison et al., 2005). Other literature indicates that low use of condoms at sexual debut was observed among women who reported having been coerced to have sex. Condom use was reduced when women felt they had no power to initiate a conversation about it in a relationship, or if they did not want their sexual partner to question their loyalty (Pettifor et al., 2009; Richter et al., 2015). However, the current paper could not examine whether sexual debut was coerced or not, as the dataset used in this study did not have this information.

At multivariate analysis, results indicated that individuals who experienced sexual debut at earlier ages had a higher risk of not using condoms at sexual debut. For instance, individuals who experienced sexual debut before 16 years had a 3.324 higher risk of not using condoms, than those whose sexual debut occurred at 16–19 years of age, who had a 1.657 higher risk of not using condoms than those who delayed their debut until they were 20 or older. These findings correlate with past literature. Hindin and Fatusi (2009) found a significant association between condom use and age at sexual debut. They argue that young people may engage in unprotected sex because they have not considered contraception and may be misinformed about the risk of pregnancy or STIs posed by unprotected sex.

### **5.7 Multiple sexual partners**

The results also indicate that individuals who had early sexual initiation were more likely to have had multiple sexual partners at the time of the interview. The risk of having more than one sexual partner decreases with age at sexual debut. In line with these results, a study in Ethiopia indicated that individuals who experienced sexual intercourse before the age of 18 had higher odds of having multiple sexual partners (Alemayehu & Worku, 2009).

Previous literature argues that individuals who delayed sexual debut tended to have fewer sexual partners and were more likely to use condoms consistently as they have better knowledge of the possible dangers of multiple sexual partners and inconsistent use of condoms (Peltzer, 2006). Secondly, younger sexually active people having multiple sexual partners may also be attributed to peer pressure and influence. Where males specifically are concerned, they gain higher status from having many sexual partners (Selikow et al., 2009). Transactional sex is one of the reasons that females have multiple sexual partners. In such relationships money and gifts are traded for sexual intercourse, and individuals would have different sexual partners providing for their material needs (Marston et al., 2013; MacPhail & Campbell, 2006).

### **5.8 Level of education**

The majority of respondents in the study had at least secondary level education. Results from the chi square table show that of those who were in secondary education 87% indicated that they experienced sexual intercourse before the age of 16, and this was the case for 5% of those with tertiary education. The adjusted and unadjusted multivariate results show that respondents with secondary education and tertiary education had a lower risk of engaging in sexual debut before the age of 16 than was the case with the group that had only primary school education. A study that looked at sexual behaviour and delinquency (Armour &

Haynie, 2007) found that individuals who initiate sexual intercourse at earlier ages had a higher likelihood of their education/ schooling being disrupted. The paper also associates early sexual initiation with other forms of risky behaviour. According to Armour and Haynie (2007), adolescents who first had sexual intercourse at an early age had a higher likelihood of engaging in other risky behaviours such as alcohol and drug use, all of which have the potential to affect the individual's academic performance, which may ultimately lead to school drop-out.

These findings correlate with findings from other studies. A study that looked at educational achievements among teenage mothers found that individuals with low academic achievement had a higher likelihood of early sexual debut, which increased the risk of pregnancy, and subsequent to this the individual would be more at risk of dropping out of school (Grant a& Hallman, 2008). However, this is not the case to the same extent in South Africa as young females are allowed to continue with their education even after childbirth. Lam et al (2013) found that respondents with lower educational attainment are at a greater risk of engaging in sexual intercourse at a younger age than those with aspirations of furthering their education. The literature also indicates a bidirectional relationship between education attainment and sexual debut. School functions as a tool to delay sexual debut through the acquisition of knowledge. Early sexual intercourse puts individuals at risk of falling pregnant and also at risk of dropping out of school. On the other hand, being out of school can lead young people to engage in sexual intercourse at early ages and in risky sexual behaviour. Lam et al. (2013) found that 50% of high school students who were friends with older classmates who were already sexually active were themselves more likely to initiate sexual intercourse in the age group 14–17 years. These students were also at a greater risk of dropping out of school, especially females, due to pregnancy.

## **5.9 Socio-economic status/wealth status**



The majority of respondents in this study indicated that they came from families of medium wealth status. Results further indicate that individuals from families of medium and low socio-economic status have a higher likelihood of having their first experience of sexual intercourse at an earlier age than respondents from wealthier households. These results correlate with those from previous studies that looked at the association between wealth status and sexual debut.

A study by Mathews et al. (2009) found that adolescents from poorer households had a higher likelihood of experiencing sexual intercourse at younger ages than adolescents from wealthier households. Another study that examined how community-level factors also found that young people from poorer households reported more frequent sexual intercourse and also reported sexual debut at an earlier age (Stephen et al, 2014). A possible explanation for this is that individuals from poorer households make means of granting sexual favours in exchange for the wherewithal to provide for their basic needs (Stephen et al, 2014).

### **5.10 Province**

The study shows respondents from Western Cape to be at greater risk of engaging in sexual debut before the age of 16 than those from other provinces. This finding is in contrast to previous findings that the rates of HIV and teenage pregnancy are higher in KwaZulu-Natal (Grant & Hallman, 2008).

Studies of sexual debut among youth in Western Cape report that majority of respondents who indicated early sexual debut also reported that their sexual initiation was unintended, which may mean that they had been coerced into their sexual debut. Many of them also reported physical violence from their partners, coercing sexual intercourse (Mathews et al., 2009).

Another study that looked at early sexual debut in Western Cape also found high levels of physical violence against females, which was the main cause of their unintended sexual initiation (Matthews et al, 2009).

### **5.11 Place of residence**

According to results from the study, respondents from urban areas have a lower risk of early sexual initiation (RRR=0.93) than those from rural areas. The majority of respondents who indicated early sexual initiation were individuals from rural areas, at 53% compared to 47% from urban areas.

These results are in contrast to what was reported in a study by Peltzer (2006) which found that adolescents in rural areas had a lower age at sexual debut than those from urban areas. Peltzer's findings correlate with results from a study by Zuma et al. (2011), which also found that the median age at sexual debut for young people in rural areas was lower than that for respondents from urban areas.

A plausible reason for a higher reported rate of early sexual debut among respondents from urban areas than rural areas is a bias in reported age at sexual debut, as the adjusted multinomial logistic model shows that respondents from urban areas have a lower risk (RRR=0.56) of initiating sexual intercourse before the age of 16.

## **Chapter 6: Conclusion**

The purpose of this study was to examine how the reproductive health and development of youth is compromised; this was achieved through examining an association between violence and early sexual debut among youth in South Africa, 2012.

It has found that violence increases the risk of initiating sexual debut before the age of 16. This is important to note as both violence and early sexual debut are detrimental to the survival and health of young people in South Africa.

The study also found that sexual debut is most prevalent in the ages 16–19 years and those who initiated sexual intercourse at earlier ages indicated higher risk of negative sexual practices such as lowered use of condoms and having multiple sexual partners. This finding is concurrent with previous studies which found that adolescents have little to no knowledge of safe sexual practices. Although in some instances individuals may have knowledge of sexual behavior, they may as a result of peer pressure engage in risky sexual behaviors, such as having multiple sexual partners and not using condoms (Selikow et al., 2009).

Results also indicated that violence is low among youth, and this however is unusual based on the fact that previous studies have indicated high rates of violence especially among youth aged 15-29 years old. A plausible reason for the low rates reported in the study could be that violence is a sensitive topic and due to self-reporting individuals may have underreported incidences of violence. Although the study did not show statistically significant results as it had been expected, results still show that violence increases the odds of initiating sexual intercourse at a young age.

The study used the Social Cognitive Theory by Albert Bandura, Social cognitive theory posits that learning is a flexible process that takes place in a social context, and is influenced by a

reciprocal causation among behaviour, cognitive and personal influences, and environmental influences (Bandura, 1986). The theory is suitable as it includes all aspects that measure the association with early sexual debut.

### **6.1 Policy recommendations**

The results of this study show that a lower age at sexual debut is strongly associated with a low use of condoms and having multiple sexual partners. It is therefore important that interventions aimed at delaying the age at sexual debut be reviewed, as youth who engage in early sex do so with little knowledge of the possible risks and the precaution measures they need to implement (Bakilana, 2005).

The interventions implemented include sex education offered as part of the school curriculum and peer education programmes at schools. These important strategies work towards delaying age at sexual debut, as young people spent approximately seven hours at school daily, which makes it an influential environment. Risks associated with early sexual debut are mostly caused by limited or non-existent knowledge and schools play a big part in socialising young people. It is important that strategies that are implemented will encourage open dialogues between parents and children, teachers and peers that will encourage young people to delay the age at sexual initiation.

Again as previously mentioned, results from this study indicate that although violence was not high it increases the risk of early sexual debut among youth. As literature has shown that violence occurs as a form of demonstrating masculinity, it is therefore important that such norms are deconstructed at young ages, so that young men know not to exert power and force on women, children and other men in order to be considered a 'man'. It is important to establish the reason young people

Secondly, young people need to be taught how to resolve conflict, and if such programmes are offered they need to be reviewed and assessed. An intervention that could be put in place is to empower young people, especially those who are most likely to become perpetrators of violence.

## **6.2 Future research frontiers**

Various areas of study could be further investigated in order to provide a more detailed approach to the study of physical violence and early sexual debut.

Firstly, the current study has provided a foundation on which future studies may build as it examined how violence and early sexual debut are associated. It is recommended that future studies

Further, the current study provided estimates of age at sexual debut and its relation to socio-economic and demographic factors, but there is a need for an updated study that will look at the knowledge, attitudes, and perceptions of early sexual debut among young people. This will give a clearer direction to policy-makers in terms of how to design interventions that would be most suitable for certain groups, this will also give a clearer indication of the determinants that are associated with early sexual debut.

Secondly a qualitative study that examines the association between violence and early sexual debut is desirable as it would explain how violence and early sexual debut are associated and to what extent is the association.

## **6.3 Study limitations**

### **6.3.1 Desirability bias and under-reporting**

A possible limitation of the study is under-reporting. Sexual debut is a sensitive topic and one that is taboo in certain cultures, and this could restrict honest and open reporting by

respondents. There could be a possible bias in reporting other sexual behaviours, such as the number of sexual partners and condom use.

Incidences of violence may also be under-reported as it may also be a sensitive topic.

### **6.3.2 Recall bias**

The quality of responses may be affected by recall bias. Some respondents may not remember the circumstances relating to the first time they had sexual intercourse and whether they used a condom at the time.

### **6.3.4 Causality**

The paper could not establish causality; all it could establish was an association between violence and early sexual debut. This is due to the cross-sectional survey used. It leaves open the question of whether violence causes early sexual initiation, or whether violence occurred because the individual experienced sexual debut before the age of 16.

## **References**

Agha. S. (2008) “Changes in the timing of sexual initiation among young Muslim and Christian women in Nigeria.” *Archives of sexual behaviour* 38(6):899-908.

Mazengia. F and Worku. A. (2009) “Age at sexual initiation and factors associated with it among youths in North East Ethiopia” *Ethiopian Journal of Health Development* 23(2):154-162

Armour, S. & Haynie, D.L. (2007) “Adolescent sex and later delinquency” *Journal of Youth and Adolescence* 36: 141. pp 141–152

Armitage, C.J. and Conner, M. (2001). “Efficacy of the theory of planned behaviour: A meta-analytic review” in *British Journal of Social Psychology* 40. 471–499.

Bakilana. A. (2005). “Age at sexual debut in South Africa” in *African Journal of AIDS Research*, 4(1). 1–5.

Bandura, A. (1986). Social cognitive theory. In R. Vasta (Ed.), *Annals of Child Development. Vol. 6. Six Theories of Child Development*. Greenwich, CT: JAI Press. 1–60.

Bankole, A.; Ahmed, F.H.; Neema, S.; Ouedraogo, C. and Konyani, S. (2007). “Knowledge of correct condom use and consistency of use among adolescents in four countries in Sub-Saharan Africa” in *African Journal of Reproductive Health* 11(3). 197–220.

Berry, L. and Hall, K. (2009). “Age at sexual debut”. Cape Town: UCT Children’s Institute.

Burton, P. and Leoschut, L. (2013). *School Violence in South Africa: Results of the 2002 National Schools Violence Study*. Centre for Justice and Crime Prevention (12).

- Cavazos-Rehg, P.A.; Krauss, M.J.; Spitznagel, L.E.; Schootman, M.; Bucholza, K.K.; Peiperte, J.F.; Sanders-Thompson F.V.; Cottlera, L.B. and Bieruta, J.L. (2009). “Age of sexual debut among US adolescents” in *Contraception* 80. 158–162.
- Cavazos-Rehg, P.A., Krauss, M.J., Schootman, M., Cottler, L.B. (2011) “Substance use and the risk for sexual intercourse with and without a history of teenage pregnancy among adolescent females” *Journal of studies on alcohol and drugs*. 72(2):194-8
- Clark, S and Mathur, R. (2012). “Dating, sex, and schooling in urban Kenya” in *Studies on Family Planning* 43(3). 161–174.
- Cooley-Strickland, M.; Quille, T.J.; Griffin, R.S.; Stuart, A.E.; Bradshaw, P.C. and Furr-Holden, D. (2009). “Community violence and youth: affect, behavior, substance use, and academics” in *Clinical Child Family Psychol Rev* 12. 127—156.
- Darabi, L.; Bankole, A.; Serumaga, K.; Neema, S.; Kibombo, R.; Ahmed, H. and Banoba, P. (2008). *Protecting the Next Generation in Uganda: New evidence on adolescent sexual and reproductive health needs*. New York: Guttmacher Institute.
- Doyle, A.M., Mavedzenge, N.S., Plummer, M.L & Ross, D.A. (2012) “The sexual behaviour of adolescents in Sub-Saharan Africa: patterns and trends from national surveys” *Tropical medicine and international health*. 17(7)
- Eaton, L; Flishera, A.J. and Aar, L.E. (2003). “Unsafe sexual behaviour in South African youth” in *Social Science & Medicine*. 56(1).
- Finer, L.B. (2007) “Trends in Premarital sex in the United States, 1954-2003” The Guttmacher Institute. 122 (2007)
- Gupta, N and Mahy, M. (2002). “Sexual initiation among adolescent girls and boys: Trends and differentials in sub-Saharan Africa” in *Archives of Sexual Behavior* 32 (1). 41–53.



Harrison, A.; Cleland, J.; Gouws, E. and Frohlich, J. (2005). “Early sexual debut among young men in rural South Africa: Heightened vulnerability to sexual risk?” in *Sex Transm Infect* (81). 259–261.

Harrison, A.; Newell, L.M.; Imrie, J. and Hoddinott, G. (2010). “HIV prevention for South African youth: Which interventions work? A systematic review of current evidence” in *Public Health* 10. 102.

Hindin, M.J. and Fatusi, A.O. (2009). “Adolescent sexual and reproductive health in developing countries: An overview of trends and interventions” in *International Perspectives on Sexual and Reproductive Health* 35 (2). Guttmacher Institute.

Johnson, S.; Kincaid, D.L.; Figueroa, M.E.; Delate, R.; Mahlasela, L. and Magni S. (2013). *The Third National HIV Communication Survey, 2012*. Pretoria: JHHESA.

Kaminer, D.; Grimsrud, A; Myer, L.; Stein, D.J. and Williams, D.R. (2008). “Risk for post-traumatic stress disorder associated with different forms of interpersonal violence in South Africa” in *Social Science & Medicine* 67. 1589–1595.

Kazaura MR, Masatu MC. (2009) “Sexual practices among unmarried adolescents in Tanzania.” *BMC Public Health*. 9(373)

Lam, D.; Marteleto, L.J. and Ranchhod, V. (2013). “The influence of older classmates on adolescent sexual behavior in Cape Town, South Africa” in *Studies in Family Planning* 44(2).

Ma. Q., Ono-Kihara. M., Cong. L., Xu. G., Pan. X., Zamani., S. Ravari., Zhang. D., Homma. T and Kihara. M (2009) “Early initiation of sexual activity: a risk factor for sexually transmitted disease, HIV infection, and unwanted pregnancy among University students in China” *BMC Public Health* 9(11)

MacPhail, C. and Campbell, C. (2001). “ ‘I think condoms are good but, aai, I hate those things’: Condom use among adolescents and young people in a southern African township”. *Social Science & Medicine* 52(11). 1613—1627.

Madise, N.; Zulu, E and Ciera, J. (2007). “Is poverty a driver for risky sexual behaviour? Evidence from national surveys of adolescents in four African countries”. *African Journal of Reproductive Health* 11(3).

Marston, M.; Beguy, D.; Kabiru, C. and Cleland, J. (2013). “Predictors of sexual debut among young adolescents in Nairobi's informal settlements” in *International Perspectives on Sexual and Reproductive Health* 39(1). 22–31.

Mathews, C.; Aarø, L.E.; Flisher, A.J.; Mukoma, W.; Wubs, A.G. and Schaalma, H. (2009). “Predictors of early first sexual intercourse among adolescents in Cape Town, South Africa” in *Health Education Research* 24(2009). 1–10

Mayosi BM<sup>1</sup>, Lawn JE, van Niekerk A, Bradshaw D, Abdool Karim SS, Coovadia HM (2012) “Health in South Africa: changes and challenges since 2009.” Lancet. 380(9858):2029-43.

Mazengia, F. and Worku, A. (2009). “Age at sexual initiation and factors associated with it among youths in North East Ethiopia” in *Ethiopian Journal of Health Development* 23(2).

Mchunu, G.; Peltzer, K.; Tutshana, B.; Seutlwadi, L. (2012). “Adolescent pregnancy and associated factors in South African youth” in *Afr Health Sci* 12(4), December. 426–434.

McGrath. N., Nyirenda. M., Hosegood V., Newell M.L (2009) “Age at first sex in rural South Africa” *Sex Transm Infect* 85:i49-i55

Mensch, B.S.; Grant, M. J. and Blanc, A.K (2006). “The changing context of sexual initiation in sub-Saharan Africa” in *Population and Development Review* 32(4). 699–727.

Moore, A.M.; Biddlecom, E.A. and Zulu, E.M. (2007). “Prevalence and meanings of exchange of money or gifts for sex in unmarried adolescent sexual relationships in sub-Saharan Africa” in *African Journal of Reproductive Health* 11(3). 44–61.

Norman, R.; Bradshaw, D.; Schneider, M.; Jewkes, R.; Mathews, S.; Abrahams, N.; Matzopoulos, R. and Vos, T. (2007). “Estimating the burden of disease attributable to interpersonal violence in South Africa in 2000” in *South African Medical Journal* 97(8).

Norman, R.; Schneider, M.; Bradshaw, D., Jewkes, R.; Abrahams, N.; Matzopoulos, R. and Vos, T. (2010). “Interpersonal violence: An important risk factor for disease and injury in South Africa” in *Population Health* 8(32).

Oljira. L., Berhane. Y and Worku. A (2012) “Pre-marital sexual debut and its associated factors among in-school adolescents in eastern Ethiopia” 12(375)

Peltzer, K. (2006). “Sexuality among adolescents in rural and urban South Africa” in *South African Review of Sociology* 37(2).

Peltzer.K. (2010) Early sexual debut and associated factors among in-school adolescents in eight African countries.” Acta Paediatr. 99(8):1242-7.

Pettifor, A.; O’Brien, K.; MacPhail, C.; Miller, W.C. and Rees, H. (2009). “Early coital debut and associated HIV risk factors among young women and men in South Africa” in *International Perspectives on Sexual and Reproductive Health* 35(2). Guttmacher Institute.

Richter L, Mabaso M, Ramjith J, Norris SA (2015) “Early sexual debut: Voluntary or coerced? Evidence from longitudinal data in South Africa--the Birth to Twenty Plus study.” *S Afr Med J.* 105(4):304-7.

Seedat, M; Van Niekerk, A; Jewkes, R.; Suffla, S. and Ratele, K. (2009). “Violence and injuries in South Africa: Prioritising an agenda for prevention” in *Health in South Africa* (374). 1011–22.

Selikow, T.A.; Ahmed, N.; Flisher, A.J.; Mathews, C. and Mukoma, W. (2009). “I am not ‘umqwayito’: A qualitative study of peer pressure and sexual risk behaviour among young adolescents in Cape Town” in *Scandinavian Journal of Public Health* 37 (Suppl 2). 107–112.

2014 Jun;

Stephenson, R., Simon, C., Finneran, C. (2014) “Community Factors Shaping Early Age at First Sex among Adolescents in Burkina Faso, Ghana, Malawi, and Uganda” *Journal of Health and Population Nutrition*. 32(2):161-175.

Timaeus, I.M. and Moultrie, T.A. (2015). “Teenage childbearing and educational attainment in South Africa” in *Studies in Family Planning* 46(2). 143–160.

Treiman, J.D. (2009). *Quantitative Data Analysis: Doing Social Research to Test Ideas*. San Francisco: Jossey-Bass.

Tsui, A.O.; McDonald-Mosley, R. and Burke, A.E. (2010). “Family planning and the burden of unintended pregnancies” in *Epidemiologic Reviews* 32.

Zuma, K.; Mzolo, T. and Makonko, E. (2011). “Determinants of age at sexual debut and associated risks among South African youths” in *African Journal of AIDS Research* 10(3). 189–194.

