

CHAPTER 1

INTRODUCTION

1.1 Brief overview and its relevance

Unplanned teenage pregnancy constitutes an important health and social problem in South Africa (Oni, *et al.*, 2005). Despite government strategies to reduce the number of unintended and unplanned pregnancies, such as making contraception a human right basic to human dignity, the number of adolescent pregnancies in the country continues to rise (Manena-Netshikweta, 2007). The government further promulgated the choice on Termination of pregnancy Act [CTOP] Act, 92 of 1996 (South Africa, 1996a), which was implemented in February 1997, to encourage every potentially fertile woman to exercise her right in deciding whether to keep the pregnancy or not (Fathalla, 1997). According to Dreyer, Hattingh & Lock (1997:60), controlled reproduction “is necessary to ensure the existence of any species”.

Conversely, uncontrolled, excessive population growth may not only lead to poverty in all its forms, but when all the available natural resources have been exhausted, the very continuation of the species may be threatened. In any society where a large percentage of adolescents are sexually active, the risk of pregnancy is high (Osborne & De Oris 1999; Rankin, 2003; Visser, 2000).

In various countries, including the Republic of South Africa (RSA), sexual maturation and initiation of sexual activities are occurring at younger ages than in the past. Save the Children, 2011 found that annually, 13 million children are born to women under age 20 worldwide, and that more than 90% in developing countries. According to Statistics South Africa, 110,477 teenage girls younger than 19 years fell pregnant last year (Statistics South Africa, 2010a). A report commissioned by the United Nation Children’s Fund (UNICEF, 2009) stated that while teenage fertility (teenagers who give birth) has been declining in South Africa, rates remain unacceptably high. This does not only have demographic implications, but also adversely affect adolescents’ reproductive health as well as various sexually transmitted infections (STIs) including HIV/AIDS. As a result of their risk-taking behaviours, high school students or learners are engaging in unsafe sexual practices and are becoming vulnerable to STIs, including HIV/AIDS as well as unplanned pregnancies.

Macleod (1999) found that 1:15 mothers aged 19 or younger, had a significant higher probability of dying from obstetric causes than adult women in the Republic of South Africa. According to the World Health Organization (WHO, 2006), for every maternal death, about 10 to 15 surviving women suffer illness or severe disability. In Sub-Sahara Africa [SSA], the majority of women

aged 19 years and younger falls in the high-risk category of poor pregnancy outcomes. The risk tends to increase with each successive pregnancy, especially among adolescents (Mahmood & Ringheim 1997; Pillay, 1992; Rees, 1995). In a project on women's nutrition and its consequences for child survival and reproductive health in Africa; Baker, Martin and Piwoz (1996: 9) found that "the most common obstetric risk factors were adolescent pregnancies, followed by unsafe abortions and sepsis". Therefore, accordingly every potentially fertile person should use contraceptives consistently to prevent the consequences of unintended pregnancies, especially during adolescence when unplanned pregnancies could jeopardize the women's chances of improving their qualifications and career prospects for the rest of their lives.

Statistics SA, population census 2010 indicated that out of a total population of 49,991,470; 20.9% were between 10-19 years of age (SA Statistics, 2010b). Dickson-Tetteh, Rees and Duncan (1999) estimated that 21.0% (8.8 million) of South Africans were aged between 10 and 19 years equally. Dickson-Tetteh, *et al.*, (1999) and Ehlers, *et al.*, (2000) found further that the majority of their respondents could not access contraceptive, emergency contraceptive and/or TOP services in spite of these services being available throughout the country, free of charge. The fact that these statistics continue when contraceptives are freely available, and accessible to most people, including secondary school learners, could be due to ignorance (Ehlers, Maja, Sellers and Gololo, 2000). This indicates a critical need to promote adolescent sexual reproductive health, in particular, among boys and girls aged between 15 and 19 years respectively.

Hence, the researcher working as a medical officer wished to identify reasons for the failure of high school learners in Tswaing Sub district of the North West province, to use contraceptives. Equally, this research is undertaken to provide information regarding the sexuality of teenagers that can be used in prioritizing interventions to minimize teenage pregnancy and sexually transmitted infections.

Popenoe, *et al.* (1998) maintain that the Republic of South Africa cannot support more than 80 million people and that the zero growth rate, that is two children per family, should be reached by 2020 in order not to exceed that number. This may only be achieved by effective contraceptive practices, enhanced sex education programmes in schools and consistent dissemination of sex information to secondary school learners.

1.2 Rationale for the study

In the Republic of South Africa, as in many other countries, secondary school students engage in frequent sexual activity, use contraceptives ineffectively or not at all, and the pregnancy rates are high especially in the rural areas, where the use of contraceptive might still be associated with

taboos (Bodibe, 1994). Although youth empowerment with sex information has been widely discussed and is accepted as a fundamental principle in health promotion in the South Africa, its practical application is still subject to debate. In Zambia, Ndubani and Hjer (2001) found that sex education programmes increased the use of contraceptives and condoms from 19.5% to 39.0%. Effective sex education programmes might produce similar results in the Sub-district and the country in general.

1.3 Statement of the problem

The researcher works as a medical officer noticed the high incidence of teenage pregnancy among high school learners who were attending antenatal care at the local clinics in Tswaing Sub-district and this became the major motivation for this study. One in three teenage learners were found to be pregnant or already had at least a child.

Furthermore, I observed that there was equally a high incidence of sexually transmitted infections including HIV/AIDS among these high school pregnant learners diagnosed and managed during antenatal care visits.

Despite this, the majority of this adolescents interviewed did not have access to sexual and reproductive health information and services.

High school learners' pregnancies pose major public health problem in the developed and developing countries, including South Africa. These pregnancies are mostly unplanned and unintended, and many are terminated either legally or illegally (Klima, 1998). 30% to 50% of women presenting for CTOP were not using contraceptive at the time of conception, and similar numbers of pregnancies were unplanned and unwanted (Bongaarts, 1997). Learners' pregnancies are associated with far-reaching effects, such as jeopardizing adolescents' educational progress and future careers. Learners' pregnancies further drain public funds.

1.4 Purpose of the study

The researcher wished to answer the following questions:

- What knowledge, attitude and practices do secondary school students in the Tswaing Sub- district of the North West Province have about contraception?
- From whom do secondary school learners in the sub-district learn about sexuality, pregnancy and contraceptives?

- What strategies could enhance learners' utilization of reproductive health services in the Sub-district?
- Why do secondary school students in the sub-district use or fail to use contraceptives?
- What barriers do secondary school learners in the Sub-district encounter in accessing contraceptives?
- What reproductive health services do secondary school learners in the Sub-district use?
- What reproductive health services do secondary learner in the Sub district need?

1.5 Justification for the study

The justifications for the study were to generate information and strategies to be used by professionals and learners to reduce the number of unintended teenage pregnancy and sexually transmitted infection among high school learners in Tswaing Sub-district of the North- West Province. The intention was to provide a basis for appropriate intervention as well as for creating opportunities for secondary schools to produce sex education policies and programmes.

The findings of this study may provide a basis for reviewing the current health behavior programmes offered in schools, clinics and the hospitals in Tswaing Sub-district. This, in turn , could enable the development of a more reality-based integrated programme to meet the health needs of secondary school learners/students and adolescents in the North West province in general, with special emphasis on safe sexual practice or delayed sexual practices.

Furthermore, the results of the study may lead to the development of programmes to revitalize sex education, sensitization, mobilization and motivation for health as well as the redirection, strengthening and provision for sexual information to sustain the motivation of the secondary school health programmes in the North West province.

The provisional draft of National Health Bill (South Africa, 1996b) made provision for the development of a district health system that should transform national policies into reality-based programmes, hence meeting the need of the local communities and sustaining these programmes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature reviewed on the contraceptive knowledge, perceptions, attitudes and practices of female and male secondary school learners. The overall purposes of a literature review “is to develop a knowledge base for the conduct of research” (LoBiondo-Wood & Haber, 2002:79; Sparks, 1999:51). This review will focus on the following aspects:

- Sexuality and Contraception among adolescents
- Theoretical framework
- Benefits of preventive programmes and effective contraceptive use
- Adolescents’ knowledge of safe sexual behavior
- Factors that influence adolescents’ learning about sexuality and contraception
- Variables affecting the likelihood of adolescents’ utilization of reproductive health services.
- Secondary school learners’ attitudes as perceived barriers to contraceptive use
- Influences on adolescents’ sexual practices
- Services needed for secondary school learners
- Conclusion

2.1.1 Methods of Literature Search.

The literature review covered relevant literature retrieved from the Internet, WHO manuals, the WHO Reproductive Library CD-ROM, conferences and discussions with experts in the reproductive health in the province and in Gauteng province.

Pubmed was the engine used for literature search on the internet, and whenever there were overwhelming references; limits to articles published last ten years, in English, done on humans with link to full text could be used to get acceptable number of articles to screen. Consultation of the research centre at the department of family medicine for full text and relevant articles at the University of Limpopo (Medunsa Campus) were made. Relevant books about the topic were also read.

The researcher used the following key words and phrases to search relevant literature: adolescent, pregnancy, “adolescent perceptions on contraception”, “adolescent reproductive health”, “adolescent contraceptive practices”, “contraceptive services”, “culture and contraception” and “contraceptive beliefs”.

2.2 Sexuality and Contraception among Adolescents

The study was motivated by a desire to design interventions to change the prevalence of certain behaviour and improve adolescents’ health status as well as to better understand why adolescents adhered to specific behaviours.

Frank (2000); Maes & Louis (2003) as well as Smith (1998) emphasized that health behaviours can vary from enhancing or protective behaviour (such as health screening, clinic attendance, condom use in response to the threat of HIV/AIDS and contraceptive use to prevent unintended pregnancies) to avoidance of health-harming behaviour (such as non-use of contraceptive by adolescents) which could have immediate and long-term effects on the adolescents’ health, education and general well-being.

The literature showed that a substantial proportion of unmarried young adolescents in South Africa and other countries were sexually active without perceiving themselves to be susceptible to pregnancies as they did not use contraceptives (Leach, 2002; Martin, 1997). Many pregnancies among adolescents and young adults in the USA, the UK, Sub-Saharan Africa [SSA], and South Africa were unwanted and unintended (Maja, 2002; Mpshe, Gmeiner & Van Wyk 2002; Miller, Forehand & Kotchick, 1999). Many unintended pregnancies were terminated either legally or illegally. Jurgens (2002) reported that 80 873 TOPs were performed on women younger than 18 years of age in South African hospitals and clinics in 2001. In a study on adolescent contraceptive use in the USA, Moore and Burton (1999) found that among adolescents aged 14 to 17, 83% of the respondents were not using contraceptives. Of these, 75.0% had already given birth to a child and indicated that their pregnancies were not planned.

The US Centre for Disease Control (CDC) (1999) reported that SSA has the lowest rate of contraceptive use in the world, ranging from 4.0% in Nigeria to 48.0%. Several intrinsic and extrinsic factors contributed to these low rates, including difficulties in obtaining contraceptive supplies, limited clinic services and attitudes of the clinic staff (Stein, 1997). In South Africa, Rakel (1999) as well as Tiltson and Maharaj (2001) found that between 40.0% and 70.0% of women presenting for CTOP were not using contraceptives at the time of conception, and that similar numbers of pregnancies were unplanned. Thus low rates of contraceptive use prevail in South Africa as well. The researcher found no specific studies on the prevalence of contraceptive use in the North West Province.

In Kenya, 88.0% of females had sexual intercourse by the time they were 15 and in Nigeria 69.0% of all female adolescents were sexually active by the time they were 15. These adolescents might not practice safe sex and might have inadequate knowledge about contraceptives (Theron & Grobler, 1998). In the USA, Unger and Molina (2000) found that young people aged 15 to 18 used effective methods of contraceptives sporadically or incorrectly. According to Unger and Molina (2000), 13.0% reported periodic abstinence without accurate knowledge of reproductive physiology and the timing of ovulation while 46.0% reported that at their first visits to contraceptive clinic, they were already pregnant.

According to Meadows, Sadler & Rertmeyer (2000), Improving adolescent reproductive health (RH) in South Africa requires reducing unintended pregnancy and childbearing rates and the incidence of STIs among adolescents. In order to reduce these negative health outcomes, it is important to examine antecedents of these sexual behaviours (Meadows, Sadler & Rertmeyer, 2000). The value of population control in South Africa by using contraceptives effectively is widely acknowledged as a vital requirement for the achievement of optimal health for all (Dreyer, *et al.*, 1997).

According to Tilton and Maharaj (2001), the following positive reproductive health [RH] behaviours are necessary to reduce the numbers of unintended pregnancies if adolescent RH is to be improved in South Africa:

- Delay the timing of first sexual encounters (also termed “sexual experience, first sex or sexual debut”).
- Reduce sexual activity among sexually experienced adolescents, including the incidence of multiple sexual partners.
- Improve the effectiveness of contraceptive use for pregnancy and/ or disease prevention.

2.3 Theoretical framework

Six components of the Health Belief Model (HBM) are significant determinants of behavior and include: perceived susceptibility, perceived benefits, perceived barriers, perceived cost, efficacy, and cues to action (Clake, Lovegrove, Williams & MacPherson, 2000; Glanz, Rimer & Lewis, 2002).

2.3.1 Perceived susceptibility

Frewen, Schomer and Dunne (1994:39) define perceived susceptibility as the “individual’s perception of the degree of his/her susceptibility to a health condition”. Wallace, Green and Jaros (2003) state that in reproductive health issues, perceived susceptibility to pregnancy would positively influence the use of effective contraception. However, in Boston [USA], Hacker, Amare, Strunk and Horst (2000) found that amongst the high school adolescents some failed to use contraceptives even though they perceived themselves to be susceptible to pregnancy. Peltzer (2001) investigated knowledge and practices regarding the correct use of condoms among university student in the Limpopo province, and showed that 29.0% prevalence rate of condom use among male students. This could indicate that the students did not perceive themselves to be susceptible to STIs, including HIV/AIDS. However, female students perceived themselves to be at risk of pregnancy, and 49.0% used female condoms.

2.3.2 Perceived benefits of contraceptive service.

According to the HBM, belief in the effectiveness of contraceptive methods in preventing pregnancies should correlate positively with their consistent use (Hiltabiddle, 1996). Hanson and Benedict (2002), Nefale (1999) as well as Ross (2001) found that people are more likely to comply with health recommendations when they believe that these actions will be effective in preventing, detecting, or treating the disease and thus reducing its threat to them.

Partners’ willingness to use condoms and parental support for contraceptive use are significant psycho-social factors in consistent condom use (Hanson and Benedict, 2002).

2.3.3 Perceived barriers to using contraceptives.

Perceived barriers are “possible blocks or hindrances to engage in preventive behaviours, including such factors as cost, inconvenience and unpleasantness” (Agha, Karly & Meekers, 2001:149; Laraque, McLean, Brown-Peterside, Ashton & Diamond, 1997:319). Sortet and Banks (1997:232) state that perceived barriers to health actions include such items as phobic reactions, physical as well as psychological barriers, accessibility factors and personality characteristics. Monetary cost of transport might also contribute to the negative utilization of contraceptive services because of the distances from where adolescents live. Tadiar and Robinson (1996:77) found that barriers to contraceptives include a country’s law, the influence of foreign agencies, medical barriers, as well as social, ethical and political issues.

2.3.4 Perceived cost by using contraceptives

The fourth component of the HBM is perceived cost. An estimated 120 million women, young and old, in developing countries do not use contraception, even though they do not want to conceive. The main reason for delaying the use of contraceptive methods might be cost in terms of transportation fees, payment for contraceptive consultations and treatment and the time missed from housework, paid work or school work in the case of adolescents (Tadiar & Robinson 1996:79). In a study on the cost of contraceptive services in Mexico, Hubacher, *et al.* (1999:121) warn that “if providers lengthened their workdays, increased their counseling time and dispensed more contraceptives during each visit, the overall cost per couple-year of protection would decline from the 1995 level of E273.99 (\$23.2) to E207.86 (\$17.6) (according to the official equivalent rate US\$ equal E11.81) by 2010”. At couples’ level, cost reduction might include transport costs and time spent on consultations. Therefore by improving the service delivery system, the Mexican Ministry of Health managed to offer more cost-effective contraceptive service to clients.

2.3.5 Efficacy of a contraceptive

Efficacy means the capacity for producing a desired result or effect. Efficacy of a contraceptive means the “effectiveness of a contraceptive method in preventing pregnancy and this is the standard measure against which other contraceptive methods are compared” (Rees 1995:35). There are two measures of efficacy, namely method effectiveness and user effectiveness. According to Roy and Johnsen (2002:8), method effectiveness is the protection a woman receives when a method is used correctly, while user effectiveness is the success of a method in preventing pregnancy. The WHO (2008) showed that 93.3% of women from a wide range of socio-economic and educational levels in five countries were successful in using natural contraceptive methods. The natural contraceptive methods included complete abstinence, periodic abstinence and coitus interruptus. This finding underscores the method efficacy and user effectiveness of natural contraceptive methods.

According to Hatcher, *et al.* (1997:154, 227), the “effective rate of condom use was 97.0% for beginners, while the effectiveness of oral contraceptives was 100.0% with combined oestrogen-progesterone pills. An estimated 50% to 75% of women for whom oral pills had been prescribed would consistently use them for a year, while 25% to 50% would stop using them within the first month of use”. Hatcher, *et al.* (1997:342) stated that natural contraception “in the form of

abstinence was 100% effective, but coitus interruptus (withdrawal), when used consistently and correctly, produced an 80% efficiency rate”. Permanent sterilization, which includes vasectomy and tubal ligation, was also highly effective. Vasectomy “is not 100% effective until all sperm in the reproductive system is ejaculated, which could take up to six weeks. It is essential that sterilized men return to the health care facilities for sperm count until no sperm is detected in the semen. With regard to tubal ligation, method failure may result in ectopic pregnancies” (Hatcher, *et al.*, 1997: 384). In view of these findings, it is critical that contraceptive providers recommend effective contraceptive methods to their clients, including secondary school learners.

2.3.6 Cues to action

According to Janz and Becker (1998:11), specifically “what constitutes cues to action and how they affect behavior still needs intensive investigation. The use of mass media or other exposure to information from contraceptive providers might be influential in urging people to use a recommended effective contraceptive practice”.

Kim, Kols and Mucheke (1998:4) maintain “that contraceptive counseling is fundamental to inform clients about various methods for clients to make the right choice”. Informed choice emphasizes that client select the method that best satisfies their personal, reproductive and health needs. They showed that providers seldom tailored their discussion about contraceptives to specific clients’ reproductive needs or health risks. Cues to action must occur to trigger the appropriate behavior. Cues might be internal, like perception of bodily states, or external, like interpersonal interaction and the impact of communication media. Katz, West, Doumbia and Kane (1998:109) point out that “the intensity of a cue required to instigate action is presumed to vary with the level of psychological readiness to act”. In this study, mass media campaigns, advice from doctors and school nurses and reminders from doctors and nurses were investigated as external stimuli.

2.3.7 Modifying factors

Factors that could modify secondary school learners’ choice of contraceptives include demographic, socio-psychological and structural variables.

Demographic variable include age, sex, race and ethnicity, religion and level of education. Demographic variables relate to the use of different methods of contraception. For example, secondary school learners and young women frequently use contraceptive pills than other women

(Neff & Crawford 1998; Thomas, 1995). Therefore, learners' age might influence their decision to use contraceptives or not. The nature of a woman's relationship with her partner might influence her use of effective contraceptives. Calnan (1997); Condelli (1997) as well as Mullen, Hersey and Iverson (1998) found that women in stable relationships might use contraception more regularly than women in casual relationships. The type of relationship might also affect contraceptive choice, because people in more stable relationships tend to have more frequent sexual encounters (Mullen, *et al.*, 1998).

Socio-psychological variables that could affect learners' decisions to use contraceptives include personality, social class, economic status and peer pressure. Secondary school learners might be influenced positively by peer pressure such as applying preventive measure despite a low individual motivational level. Mattson (1991) found general health motivation or readiness to be concerned about health matters an important aspect.

Personality factors can be positively or negatively associated with the practice of health behaviours (Murray & McMillan, 1998).

Poverty could also be an important factor influencing decisions on whether or not to use contraceptives (MacPhail & Campbell, 2001).

2.4 Benefits of preventive programmes and effective contraceptive use

Fathalla (2007) found that sexuality programmes could significantly improve the health and status of women in general. They would be able to complete their education, maintain gainful employment, make independent marital decisions and have more choice open to them.

Effective contraceptive use has the following benefits for adolescents:

- Health growth and development
- Protection from early and/or unwanted pregnancies can provide protection from STIs/HIV
- Greater opportunity for education
- Job possibilities
- Prevention of unsafe abortions
- Improved quality of life (Fathalla, 1997)

Interventions that focus on early childhood literacy, youth development, community volunteering, and nurse home visiting would complement more traditional sexuality education programmes. Such programmes should be incorporated with an ecological approach and demonstrate that individual, family, school, community and social characteristics are all

associated with sexual behaviours, adolescent pregnancies and STIs (Santelli, Lowry, Brener & Robin, 2000).

In the USA, Santelli, *et al.* (2000) found that young people who receive interventions from infancy through elementary school have a greater likelihood of delaying childbirth in their teenage years. Adolescents involved in community volunteer service learning programmes that include volunteering and classroom activities exhibited a lower likelihood of engaging in sexual activities and becoming pregnant. Similarly, adolescents involved in church volunteer services, and regularly attending church services and church meetings, were less likely to be sexually experienced at a younger age (Gogo, 1997; Lollis, Johnson & Antoni, 1997). Adolescent programmes that combine youth development with sexuality education appear to provide a promising approach for delaying sexual initiation and reducing pregnancy and childbearing among adolescents.

2.5 Adolescents' knowledge of safe sexual behaviour

A dependence on self-management could influence adolescents to be sexually active without knowledge of contraception and contraceptive use. In the USA, the UK, Sub-Saharan Africa and South Africa, the proportion of sexually active adolescent girls, who use contraceptives regularly, is relatively small (Ndubani & Höjer, 2001). Several factors contribute to this low rate, including difficulties in obtaining contraceptive supplies, limited numbers of contraceptive service, and the value that many cultures attach to contraceptive practices (Allen, 2001). Anecdotal material suggests that the situation is the same or even worse in developing countries. Adolescents may be ignorant about reproductive physiology and the implications of sexual intercourse. Contraception might remain a source of embarrassment to many adolescents (MacPhail & Campbell, 2001; Ndubani & Höjer, 2001).

In their study in the USA, Crosby and Yarber (2004) reported that adolescents in rural areas were at greater risk of unintended pregnancies and negative birth outcomes because of limited availability of health services. In a comparison, family planning services in rural and urban areas of South Africa, Erasmus and Bekker (1996) as well as Thompson, Frazer and Anderson (1997) found that family planning and prenatal services were provided predominantly in urban areas. Furthermore, there was a lack of diversified health services in rural areas, and no planned parenthood clinics or termination of pregnancy (TOP) services in these rural areas.

According to the WHO (2006), despite the advances in contraceptive technology, adolescents' access to reliable methods of contraception remained underutilized. Factors such as long distances to clinics, lack of transportation, and clinic hours coinciding with school hours, could make adolescents' access to contraceptive services nonexistent or expensive. Adolescents might

feel intimidated by meeting their teachers, their parents and other community members at contraceptive services. This could contribute to adolescents' underutilization of these clinics (Little, 2007; Wood, *et al.*, 2000).

Adolescents might perceive contraception as a source of embarrassment, resulting in limited knowledge and ineffective utilization of contraceptive (Frank, *et al.*, 1997).

2.5.1 Sexuality

Sexuality means not only sexual practices, but also what people know and believe about sex; particularly what they think is natural, proper and desirable. Sexuality includes people's sexual identities in all their cultural and historical diversity. It can be assumed that while sexuality cannot be divorced from the body, it is also socially constructed (Finer, Darroch & Singh, 1999).

Attitudes to sexual and reproductive behavior vary considerably between different social and cultural groups and overtime. In many traditional societies, child marriages and early pregnancies were fundamental characteristics of the social system, while in others; reproduction during adolescence was viewed as a sign of improper conduct to be condemned. Adolescent sexuality cannot be understood within a purely biological frame of reference, but should be seen as a social category whose composition and implications are liable to change according to interacting traditions, social institutions and values (Dutra, Miller & Forehand, 2000).

2.5.2 Safe sexual behavior

MacPhail and Campbell (2001) in a study in a South African township, to evaluate the impact of sex education on adolescents' knowledge of safe sex and the prevention of pregnancy showed that 92.0% of the boys and 79.0% of the girls in Grade 9 had had sexual intercourse. Peer influence has far-reaching effects on both male and female adolescents' sexual behavior. In their study in Zambia, Feldman, *et al.*, (1997) found that the respondents engaged in risky sexual behaviours and two-thirds of them had multiple sexual partners. Many young African men and women seem caught between traditional and modern influences. The traditional belief that a man must be sexually persistent, vigorous and productive still determines sexual behaviours. MacPhail and Campbell (2001) as well as Otoide, Oronsaye and Okonofua (2001) found that although there was widespread awareness of preventing sexual transmitted infections and HIV/AIDS, the use of condoms did not change.

Muuss (1996) as well as Silberschmidt (1999) found that adolescent boys boasted of having many girlfriends, encouraging each other to conquer adolescent girls at high school. Frank, *et al.*, (1997) as well as Rycek, Stuhr, McDermott, Benker and Swartz (1998) found that young people commenced being sexually active from 11 to 12.5 years, and had unprotected sexual intercourse, fostered negative attitudes towards family planning services, and both male and female adolescents were misinformed on several methods related to contraception.

Adolescents engaging in risky sexual behaviours with multiple sexual partners indicate a need for comprehensive adolescent reproductive health services. These services must be available, user friendly and accessible to adolescents (Muuss, 1996).

2.6 Factors that influence adolescents' knowledge about sexuality and contraception

2.6.1 The family

The family is “an entity maintained by the mutual interaction of its members. As a result, what happens to one member affects the others” (Kallen, Stephenson & Doughty, 1999:156; Malcolm & Stone, 2003:1254). The effect depends on the level and nature of the relationship between the different family members. Adolescent's choices about contraception and contraceptive practices are influenced by family relationships but also by aspects such as race, cultural practices and beliefs (Viljoen, 1997:70).

2.6.1.1 Parent-child communication and relationship with parents

According to Lamanna (1999), home remains a major source for learning about sexuality. Parents should ensure that children grow up capable of making informed decisions about their sexuality. Parents should not only act as role models, but also communicate freely on sexuality, development and sexual behavioural patterns (Magagula, 1998). Communication is essential for increasing responsible sexual behavior among adolescents (Unger & Molina, 2000). This parent-child dialogue should begin during primary school as boys and girls often become sexually active before Grade 7. Girls aged 12 have delivered babies in some South African hospitals and in the United States of America (Manlove, *et al.*, 2001).

A sexual health programme for adolescents was introduced in the Republic of South Africa [RSA] in 1984 with the main aim of providing education and contraceptive services to sexually

active adolescents (Males and females). This programme formed part of the preventive and promotive health service for the country. The failure of this programme was reflected by an increase number of adolescent pregnancies and backstreet abortions (Mayekiso & Twaise, 1993; Mogotlane, 1993; Nqxabasi, 1997).

In 1996, the South African government further made the dissemination of information about the prevention of pregnancy and the use of contraceptives for persons younger than 16 years, one of the National Health Service, NHS targets. The South African [SA] government attempted to tackle problems associated with adolescent pregnancies by strengthening parents' responsibilities on issues related to adolescent sexuality in the home. Some parents and religious leaders attacked the introduction of sex education in South African Indian schools as a pilot programme in 1993, expressing fears that their children would be corrupted by such knowledge (Tiltson & Maharaj, 2001).

Parents are the primary sex educators of their children, and need to be encouraged and empowered to provide sex information to their children (Kasen, Cohen & Brook, 1998). There is inadequate communication about sex between parents and children, particularly between fathers and their children (Kumar, Uduman & Kurran, 1997). According to Hoffman (1998), contraception in the Republic of South Africa [RSA] is not a comfortable area for parents-child communication. Richskim (1999) contends that when the possibility of sexual activity is broached, parents' anxieties, fears and embarrassments interfere with open, honest discussion. MacPhail (1998) found that many obstacles prevent clear communication about sex between parents and children. Nicholas (1998) as well as Rogo, Lem French and Hord (1998) found that where parents and adolescents discussed sex topics, parents indicated that certain topics had been discussed, whereas the adolescents felt that the same topics had been neglected.

2.6.1.2 Benefits of parent involvements in sexual issues.

In a national survey of minority teenager in the USA, Miller, *et al.*, (1999) found that generally parent-child communication was associated with a lower frequency of intercourse and fewer sexual partners. In the United States (USA), Bearman and Brücker (1999) reported that strong parent-adolescent emotional connections and participating in shared activities with parents were associated with later adolescent sexual debuts and a lower likelihood of pregnancy. The benefits of parent-child ties seem to operate even through peer influences. These resulted in higher levels of satisfaction with mother-adolescent relationships, delayed sexual initiation, increased contraceptive use, less frequent sexual intercourse and a lower likelihood of pregnancy (Dittus & Jaccard, 2000).

Miller, Levin and Whitaker (1998) found a strong association between parent-child discussions and consistent condom use by adolescents. Romer, *et al.*, (1999) found that girls who discussed with their parents how pregnancy occurred had a lower likelihood of becoming adolescent mothers than girls who did not talk to their parents. In the USA, Holtzman and Rubinson (1995) examined never married 13 to 19 year-old American adolescents about their knowledge of HIV/AIDS in the USA. The results indicated that students who discussed HIV/AIDS with their parents were less likely to report multiple sex partners or to have unprotected sexual intercourse. In contrast, students who discussed HIV with their peers were more likely to have multiple sex partners.

According to Updegraff & Obeidallah (1999), parents in South Africa should be assisted by the government and professional people like teachers, nurses and doctors to realize the importance of open discussions about sexuality with their children. The quality of parent-child relationships has a vital association with adolescent reproductive health. Adolescents in the United States [USA] who had close emotional bonds and satisfying relationships with parents were respectively less likely to engage in sex, more likely to use contraception, and less likely to get pregnant (Heilman, 1998). In addition, if parents talk to their adolescent children about sex, contraception and sexually transmitted infections [STIs], adolescents displayed a higher likelihood of making effective choices about their sexual behaviours (Frank, Papini & Speizer, 2003).

2.6.1.3. Monitoring

Parents who monitor their children's behavior can help to delay their sexual debut (MacPhail & Campbell, 2001; Ndubani & Höjer, 2001). According to Smith (1997), high levels of parental monitoring among African-Americans were associated with a lower likelihood of every sexual debuts (age 10 or earlier) as well as reduced rates of sexual initiation at later ages. In New Zealand, Elliot, *et al.*, (1999) found that many adolescents feel that as long as their sexual behavior is not explicitly brought to their parents' attention, their parents will remain silent and hope that things will take care of themselves. In families sharing sex information, children can make informed decisions. Parents should be included in education programmes. Parent workshops should be considered to encourage breaking down barriers to intra-familial communication about sexual issues (Frank, Papini & Speizer, 2003).

Kim, *et al.*, (1998) maintain that adolescents of parents who monitor their behaviours are at lower risk than adolescents who live apart from their parents. Hutchison and Conney (1998); Miller, *et al.*, (1999) as well as Taris and Semin (1998) found that adolescents whose parents were alcoholic or drug users were more likely to experience problems in sexual matters.

2.6.2 The school

The role of school in sex education should not be overemphasized at the expense of what happens at home. Schools should promote partnership that will increase parental involvement in fostering the social, emotional and academic growth of learners since sex education is only part of the total integrated education for living. The school and the community should cooperate as a unit to provide sexuality and contraceptive education to learners within its boundaries (Jaccard, Ortlus & Gordon, 1998).

The school curricula should enhance sex education at secondary schools (Ayaniwura, 2004; Lunt & Livingston, 2006; Santelli, Robin, Brener & Lowry, 2001; Steven-Simon, 2008).

Sex education in the US schools increased the probability that adolescents would acquire more accurate information at school than through other means (Guttmacher, *et al.*, 1998). In the Republic of South Africa and other countries, schools were proposed as optional sites for providing contraceptives (Department of Education, 1994). Some school-based clinics in the USA and the UK offer pregnancy tests; treat sexually transmitted infections [STIs] and provide counseling on pregnancy and HIV (Frank, *et al.*, 1997; WHO, 1998; WHO, 1999). School health nurses in the South Africa do not provide contraceptive services. School hours coincide with clinic hours, resulting in poor use of contraceptives by sexually active adolescent learners (Ehlers, *et al.*, 2000).

2.6.3 The teacher

School teachers/educators and other members of the community should debate about sex education and specific content to be offered. However, learners should not progress through adolescence instructed and counseled primarily by their peer groups about their sexuality and contraception. Formal educational approaches to sexuality sometimes consist of presenting a film or a lecture on the dangers of sexually transmitted infections (Ayaniwura, 2004).

2.6.4 Health education officers (hospital and clinic professionals)

Richter (2000) emphasize that sex education should be integrated into an interdisciplinary programme on health education. The main role of health education officers should be to instigate, plan and evaluate health education, including sex education for schools.

Knowledgeable persons should talk to children about sexual issues and facilitate workshops for parents about the information provided, contraceptives and HIV/AIDS (Smith and Maurer, 2005).

2.6.5 Peer influence

Peer pressure is a significant factor in the initiation of smoking, drug use and sexual involvement among adolescents (William & Currie, 2000). Most adolescents turn to their peers as the principal source of information on sexuality (Bayona & Kanji-Murangi, 1996; Beake & Zimbizi, 1996; Elliot, *et al.*, 1999). Lindsay (2005) found that 78% of young people aged 11 to 19 years received information on sexuality from school friends. Mayekiso & Twaise (1992) found that peer groups were the main source of sexual information among adolescents. Children spend a lot of time with their peers, who influence them. Joffe (1999) examined why adolescents became active and found that peer pressure was a significant factor in teenage sexual behavior. Marsiglio and Mott (2007) maintain that variables such as personality and family relationships determine who has the greater influence, parents or peers. Furthermore, conformity to peer pressure could result from lack of parental attention, interest, warmth and understanding (Marsiglio & Mott, 2007).

Bekaert (2002) emphasizes that sexual behaviours are learnt, and parents and peers are the two major socialization agents. Wilson and Williams (2002) found signs of tension among adolescents and increased rebellion against authority at home and at school. If family relationships were supported within their families, adolescents' dependence on peer might be reduced (Muyinda, *et al.*, 2001; Myers & Midence, 1998).

2.6.6 Mass media

Television and radio programmes have great potential for disseminating sexual information. Television is not the only source of sexual information available to adolescents, but is an accessible and compelling one. Television can portray human sexuality in a socially responsible manner or as degrading and high-risk behaviours. Television can also make irresponsible sex behaviours appear glamorous or without any negative consequences for the parents and/or children (Briggs & Blinkhom, 2002; Morrison, 1999).

2.7 Variables affecting the likelihood of adolescents' utilization of reproductive health services

The WHO (1998d: 16) defined Primary Health Care (PHC) at Alma-Ata as “essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community. It is the first level of contact of individuals, the family, and the community with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care service.” In line with the NDoH's policy in the RSA, mother, child and women's health (MCWH) (including adolescents) should form an integral part of PHC services. Accordingly, accessible services for adolescents should be based on the following (Dennill, *et al.*, 2005; DOH, 1997; WHO, 2002):

Equity: Every adolescent should have equal access to adolescent services.

Accessibility: Services need to be expanded to reach all adolescents in the country including the most remote areas.

Affordability: The level of health care should be in line with what adolescents can afford. No adolescent should be denied reproductive health care because of their inability to pay.

Availability: There should be sufficient and appropriate services to meet the particular health needs of the adolescent.

2.7.1 Utilization of contraceptive services

The location of the clinic is an important factor for young people. Reliable transportation for routine clinic use becomes even important in the case of emergency reproductive health issues and for adolescents who live in remote areas. Kunene (1995) studied 210 adolescents at two senior secondary schools near Empangeni, in KwaZulu-Natal and found that they were unable to use the health centre because it was too far away, they did not know how to get there, and they needed transport. Although the SA government adopted the Reconstruction and Development Programme (RDP) as a means to built health facilities in various districts, many districts still have inadequate health facilities.

A range of different resources is needed to enable learners to make informed decisions about the outcome of unplanned pregnancies. An opportunity to discuss the matter with someone outside the family lessens pregnant mothers' sense of isolation (Boult & Cunningham, 1992; Gilles, 1998; Goosen & Klugman, 1996). When counseling services are provided, issues such as

confidentiality, the type of counseling, the amount of space for counseling services and transportation needs to be considered (Goosen & Klugman, 1996).

Mothers' inability to talk to someone renders them incapable of deciding whether to keep their babies or use choice on termination of pregnancy (CTOP) service or not (Makhetha, 1996; Mkhize, 1995). Some South African studies of Black adolescent pregnancies failed to address the relationship between the maternal positions of hiding the information from everyone else and deciding to use CTOP services (Pearton, 1999). However, the CTOP decision could be seen as taking responsibility for an unfortunate and undesired event that could be prevented by using contraceptives or accessing emergency contraceptives (Flisher & Chalton, 2002; Nyazema, 2000; CTOP ACT, 1996).

Pregnant adolescent students are usually the last to receive attention while teachers are busy interacting with many students at a time (Somers & Fahlman, 2001). Counselling is crucial. Through counseling, providers help clients make and carry out their own choices about reproductive health and family planning. Effective counseling could help clients to use contraceptives longer and more successfully.

2.7.2 Consultation

Consultation gives citizens a chance to contribute to public service delivery thereby promoting and maintaining cooperative relationships between service providers and clients. Webb (1998:12) found that most of the respondents were particularly concerned about providers' attitudes, describing service providers as "unkind, rude, brusque, and unsympathetic with young people, uncooperative, judgmental and outright hostile". Adolescents' decision to seek health care or not were influenced by factors such as honesty, respect and confidentiality from the health care providers (Mnyrka, *et al.*, 1997:180; Senderowitz, 1997:27).

Adolescents in the Limpopo Province (LP) reported unfavourable experiences with clinic nurses (Wood, *et al.*, 1997; Netshikweta, 1999). For example, nurses asked irrelevant questions and if they did not reply to questions, they were scolded. Such behavior discouraged young people from coming back to the clinic. In a Soweto clinic in South Africa, clinic nurses refused to supply condoms to boys aged 11 and 12 years, telling the boys that they were too young to have sexual intercourse (Kunene, 1995). These findings indicate that some health professionals have negative attitudes towards young people using reproductive health clinic (Kunene, 1995).

2.7.3 Scheduling of clinics hour for adolescents

There is inequity in access to effective contraceptive services, particularly in previously disadvantaged areas as well as in many high density urban and semi-urban areas and informal settlements (UNPF, 1998). Rigid and relatively short clinic hours for adolescent consultations (generally from Monday to Friday, 08:00 until 13:00 or 16:00) reduce service availability and can contribute to, many hours of waiting by adolescents. School-going children cannot attend at these times and cannot wait for many hours. The availability of contraception is further reduced at clinics where contraceptive services have not been fully integrated with primary health care (PHC) services.

In Senegal, Senderowitz (2007) found that although a specially designed adolescent clinic was established, it was perceived to be unsuccessful as it was not accessible because it was not accessible to adolescents after 16:00. Special hours should be set aside for adolescent services if the reproductive health services are integrated with PHC services (Netshikweta, 1999; Senderowitz, 2007; Unger & Molina, 2000; Webb, 2008). Special hours or special clinics are important for adolescents who might hesitate to seek reproductive health services (Crouch, 2002; Harden & Ogden, 1999; Wright, NacFarlane & McPherson, 2000).

The WHO (2006) emphasizes that family planning, especially condom use among adolescents, should be promoted and ensured in all contraceptive services to prevent unwanted adolescent pregnancies and protect adolescents against STIs. Furthermore, adequate and appropriate equipment and supplies must be maintained and held in stock so that contraceptives can be offered when needed. Failure to provide adolescents with methods of their choice or continual contraception because of lack of stock might hamper the utilization of such health services by adolescents (WHO, 2006).

Adolescents are attracted to places that feel comfortable, provide privacy and ensure confidentiality (Varke, 1999; Woods & Theron, 1999; Senderowitz, 2007). They want to be attended to by health professionals who express care and concern in regard to their health problems. Adolescents expect warmth, compassion and a willingness to communicate in a straightforward, understandable fashion.

2.7.4 Clinic hours

In the USA, Belfield (1998) found that average waiting time for an initial visit was about an hour due to staff shortages, late arrivals of staff, extended tea and lunch breaks, socializing, inflexible routines, inefficient filling systems, poor client bookings and failure to see clients in proper

sequence. Jones (1996) showed that adolescents hated waiting for long periods for contraceptive service providers to serve them.

2.8 Adolescent's attitudes as perceived barriers to contraceptive use.

2.8.1. Attitudes towards contraceptives

Adentunji (2000) identified embarrassment, time spent in the reproductive health clinics and long waiting times as barriers to adolescents' contraceptive usage. Also a lack of knowledge about contraceptives and non-use of contraceptives contributed to adolescent pregnancies. Low income black adolescents had more negative attitudes towards birth control and used contraceptive less effectively than their white counterparts (Wright, 1997; Rhinehart & Gabel, 1998).

Increased sexual activity among adolescents is not always accompanied by increased knowledge about sexual functions, procreation, or contraceptive use (Smith & Maurer, 1995; Mbananga, 1999). Many adolescents believe that a woman cannot fall pregnant during her first intercourse or without an orgasm but, in fact, several conceive during their first sexual experience or within the first six months of becoming sexually active (Murray, *et al.*, 1998). Many adolescents also believe that people cannot contract HIV/AIDS, provided they wash their genitalia soon after intercourse (Agha, *et al.*, 2001; Bankole, Sing & Haas, 2008). In the United States (USA), Heber and George (1999) showed that both male and female adolescents were uninformed or misinformed about several topics related to contraception. Adam and Pittman (1999) showed that:

- The prevalent onset of adolescent fatherhood among their respondents was between 14 and 18 years.
- 43.0% of the adolescent fathers did not attend school at the same time of the conception of their first child.
- 73% reported having their sexual encounters at 13 years.
- 83% reported they did not use any contraceptives during sexual intercourse because condoms interfered with sexual pleasure.
- 48.3% indicated that contraceptives were the responsibility of the girls, despite the prevalence of sexually transmitted infections (STIs).

According to a similar study by Peltzer (2001), although most adolescents were knowledgeable about contraceptives, many male adolescents did not use condoms because they interfered with sexual pleasure. Adolescents reported being embarrassed about negotiating contraceptive use with their partners and about buying contraceptive like condoms over the counter. In their study in the USA, Ginsberg, Slap and Cnaan (1995) found that all the respondents had heard about contraceptive yet the majority stated that they did not know about contraception prior to their pregnancies. Some were informed at the clinic during their pregnancies, some by their mothers, older sisters or relatives during their pregnancies, and the rest had obtained some knowledge about contraceptives from health care professionals during their pregnancies.

Ndubani and Höjer (2001) studied low socio-economic black male adolescents' knowledge of condom use and awareness of STIs and HIV in a rural village in Zambia. The respondents became sexually active at an average age of 12.5, had unprotected sexual intercourse and maintained negative attitudes towards family planning services. Their reasons were long distances to reach the clinic and that condoms interfered with sexual pleasure.

Goldberg (1997) also indicated that adolescents were misinformed and had misconceptions as well as negative attitudes towards contraception, pregnancies and parenting. For example, they believed that using contraceptives made one fat, caused sterility or infertility, interfered with sexual pleasures and girls who used contraceptives were promiscuous. There was also uncertainty about who should use contraceptives, the boy or the girl.

Watt (2001) emphasizes that both partners should make sure that contraception was in fact being used, regardless of who actually used contraceptives. This should be regarded as a joint responsibility.

Makhetha (2006) in Soweto, South Africa, showed that some adolescents and their parents believed that the pill can cause serious side-effects, such as high blood pressure and infertility. Jemmot (1999) showed that many Africa-American adolescents were concerned about side-effects of contraceptives. Contraception was also seen as an interruption of the romantic idea because contraceptives were unnatural and made sex seem contrived.

Bloom and Hall (1999) as well as Mukoma (2001) showed that most males opposed the use of contraceptive by their female partners, because these could encourage promiscuity among females. Some believed that contraceptives were detrimental to health and reduced libido, and side effects including skin irritations, weight gain, swollen ovaries, and nausea and vomiting.

2.8.1.1 Adolescents' misuse or non-use of contraceptives

Various factors can adversely affect the utilization of contraceptive services and contraceptives. Etuk, *et al.*, (2004) as well as Mayekiso & Twaise (1992) showed that adolescents' contraceptive use was inconsistent, erratic and delayed, especially before the first coitus. Misconceptions include beliefs that pill caused cancer or made the user fat, and that condoms reduced pleasure during intercourse (Naude, London & Guttmacher, 1999).

In their study in Caltonville, South Africa, MacPhail & Campbell (2001) showed that some young women no longer went to local clinics after unpleasant experiences with the clinic staff. While they continued to access health care through private doctors, their access to contraceptive and condoms was decreased, as they were not as freely available in doctors' consulting rooms as at the clinics. The respondents stated further that social norms encroach on the extent to which young women were prepared to carry condoms and contraceptives with them. The respondents mentioned further that gossip was a constant source of conflict and that women carrying condoms risked being labeled a "bitch" or promiscuous (MacPhail & Campbell, 2001).

Male participants might not trust young women who carried condoms with them (Akande, 1997). Adolescents most likely to use contraception have high scholastic achievement levels, are highly motivated to complete their education and have strong religious beliefs supporting virginity (Klima, 1998).

2.8.1.2 Fear of lack of support by partner

Female adolescents have intercourse without discussing contraception with their partners because it might be difficult to discuss this issue, especially a new partner (English, *et al.*, 1998). Female adolescents found it difficult to communicate with their partners because they felt awkward and feared appearing immature or unsophisticated; believed that talking about or using contraception would cause them to lose their partners, and their partners complained when asked to use condoms (Johnson, 1995; Rorke, 1997; Poggenpoel, Myburgh & Gmeiner, 1998).

2.8.1.3 Distribution of contraceptives to adolescents

Richter (2000) reported that there was a problem of accessing contraceptive services. The most effective methods (pills and intrauterine device) were only available during the week and from

07:00 to 14:30 at most clinics. It might be difficult or impossible for adolescents to access these services during clinic hours. Distances to the reproductive health services might also be an issue, as well as adolescents' parents who might oppose the use of contraceptives (Piccinino & Mosher, 1998; Webber, *et al.*, 1999; William, 1999).

Many adolescent mothers did not use contraceptives prior to pregnancy because their mothers considered the use of contraceptives to cause infertility and/or promiscuity (Mogotlane, 1993).

According to Quinn (1999), the following factors influence adolescents' contraceptive use:

- The service providing contraceptive might not be user-friendly or adequately equipped to deal with adolescents.
- Adolescents might feel ambivalent about contraceptive usefulness.
- Community norms might not approve contraceptive use among adolescents.
- They might have problems with the contraceptive methods themselves, such as side-effects.
- Their families might have low socio-economic status.
- They might engage in sex sporadically.
- Their religious affiliation could restrain them from sexual activity.

2.8.1.4 Professional nurses in reproductive health services

In a study by Wood, *et al.*, (1997:27) on adolescent sex and contraceptive experiences and teenagers' perspective on clinic nurses in the Limpopo province, adolescents stated that "nurses ask them funny questions such as why they have sex so young" and if they did not reply to the questions, they were scolded and not given contraceptives. Kunene (1995) as well as Stanback & Twun-Baach (2001) reported that some health workers refused to give adolescents contraceptives fearing that this could encourage premarital sexual relationships.

2.8.2 Attitudes towards sex and giving birth.

Adolescents with higher sexual abstinence values tended to have better communication with their parents about issues related to sex and sexuality and reduced sexual activity among female but not male adolescents (Miller, *et al.*, 1998).

Perceptions that other boys were having sex were significant predictors of engaging in sexual intercourse for males (Racey, Lopez & Schneider, 2000). Adolescents who had initiated sexual

intercourse had lower perceptions about the normative age for initiating sexual intercourse than adolescents who were still sexually inexperienced, and reported that most of their “friends” were sexually inexperienced (Hout & Broom, 2002).

Adolescents who believed that most of their peers had had sex were more likely to report an intention of initiating sexual intercourse in the coming year (Hout & Broom, 2002). Non-white males believed that more students had initiated sexual intercourse by the end of Grade 8 than White male adolescents did, and White male adolescents intended to delay sexual debut longer than non-white male, Black female or White female adolescents (Racey, *et al.*, 2000).

2.8.3 Cultural beliefs, values and norms.

Milkhail (2001:160) describes culture as “the shared products of a human group including values, language, and knowledge and material objects”. Dreyer, *et al.*, (1997) found that negative restrictive laws, traditions and attitudes of certain cultural groups play a major role in practices, especially for adolescents. In most African cultures, women need permission from their husbands to use contraceptives. Adolescents are not allowed to get permission from parents because they are regarded as children in the family. If a man disapproves because culturally, women are expected to bear as many children as possible, then the woman has no choice but to accede to such beliefs. Vlok (2000) as well as Stein (2000) affirmed that in a society geared to believe that to reproduce is a woman’s ultimate destiny in life, the urge in a woman to have a baby or prove her fertility becomes even stronger.

Many adolescents in the Republic of South Africa are ambivalent about contraception because of cultural taboos, and procreation is a function culturally considered a sacred duty. Campbell (1997) showed that negative attitudes towards condom use were often based on cultural factors, such as the desire for children and female sexual compliance as a way of getting financial gain from their partners.

2.9 Influences on adolescents’ sexual practices

Factors that could adversely affect adolescents’ sexuality and should be overcome, if proper sexual behaviours are to be achieved for the ultimate benefit of adolescents and the country, can be classified into individual and situational factors (Smith, 1997a).

2.9.1 Individual factors

Adolescent biological factors, such as age at menarche, gender, race, ethnicity, educational engagement, sports, religiosity and knowledge of reproductive health, are all associated with positive reproductive health (Smith, 1997b).

2.9.1.1 Menarche/puberty

Bensussen, Walls and Saewy (2001); Boyer, Tschann & Shafer (1999) as well as Miller, *et al.*, (1998) found an association between puberty and early sexual debut among adolescents. An early sexual debut is associated with early onset menarche and the mean age for early onset of menstruation was 11 years (Buga, *et al.*, 1996; Mayekiso & Twaise, 1992). Adolescents who looked older than their peers were more likely to have earlier sexual debuts (Whaley, 1999).

2.9.1.2 Age

Age is an important factor influencing adolescent sexual encounters. As an adolescents' age advances, the likelihood of various sexual behaviours increases, such as frequency of sexual intercourse, the number of lifetime sexual partners and number of sexual partners during the previous year (Miller, *et al.*, 1999; Smith, 1997). Ignorance about and non-availability of contraceptives were reasons for low usage of contraceptives by adolescents (Buga, *et al.*, 2006).

2.9.1.3 Gender

Male adolescents were sexually more experienced, had more sexual partners both in the past year and in their lifetime, and had sex more frequently than female adolescent (Pesa, Turner & Mathews, 2001). Female adolescents reported higher sexually transmitted infection rates than males because their disease were more likely to be detected since they consulted reproductive

health care professionally more often than adolescent males (MacPhail & Campbell, 2001; Ndubani & Höjer, 2001). Female adolescents might also be sexually engaged with older men who would be more likely to be infected with STIs than adolescent males (MacPhail & Campbell, 2001; Ndubani & Höjer, 2001).

2.9.1.4 Race/ Ethnicity

Race is a significant factor in predicting adolescents' sexual behavior or health outcomes. Results from nationally representative USA samples of adolescents indicated that Black teenagers were more likely to have ever had sexual intercourse than non-black teenagers (Fahlman, 2001; Santelli, *et al.*, 2000). Black adolescents in the USA were reportedly between two and four times more likely to have lost their virginity by age 12 than non-Hispanic Whites (Wright 1997; Winter & Breckenmaker, 2000). Black adolescents were also more likely to have experienced first sex at earlier ages than both Hispanic and non-Hispanic White adolescents (Smith 1997b). However, Black adolescents appeared to engage in sex less frequently than non-Black adolescents in the USA (Leaper & Valin, 2006).

In the Republic of South Africa, Popis (1998) found that Black adolescents engaged in risky sexual relationships and ignored contraceptives than their White counterparts used.

2.9.1.5 Educational engagement

A high level of school engagement has an influence on early age sexual debut (Moore & Burton, 1999). Adolescents in Grades 7 to 12 who reported higher grade point average in school were less likely to have an early sexual debut. Adolescents in higher grades had already sighted their goals, had higher education aspirations, and had more positive reproductive health outcomes (Becker, Guenther-Grey & Raj, 1998). Such adolescents were more likely to use a form of contraception in their first sexual intercourse.

Ehlers, *et al.*, (2000) in the Gauteng province, South Africa, showed that adolescents who lacked educational aspirations were associated with higher risks of pregnancies. Adolescents' educational engagement affects their status, indirectly influences their use of contraception and the control they have over sexual and reproductive issues.

2.9.1.6 Sport

Sport has an important influence on sexuality among young adolescents. For female adolescents, participation in sport has been shown to have a delaying effect on initiation of first intercourse, lower the frequency of sexual intercourse, and decrease the number of lifetime sexual partners (Miller, *et al.* 1999). Female adolescents who are highly engaged in sport appear to be more capable of avoiding the severe consequences of unintended pregnancy and the risk of complications if an abortion is induced.

2.9.1.7 Religiosity

According to Random House Webster's Unabridged Dictionary (2007:798), Religiosity means "excessive devotion to religion or piety". Religiosity positively influences adolescent sexual behavior through its association with decreased likelihood of sexual initiation and adolescent pregnancy and birth.

Aggleton and Campbell (2000) as well as Brattan-Wolff and Portis (2001) showed that male and female adolescents who regularly attend church are less likely to be sexually experienced at a younger age, and female adolescents are less likely to have adolescent births. Abouzahr, Vlassoff and Kumar (1996) found that adolescents who attend church regularly are more likely to delay sexual initiation than their counterparts who do not attend church. In addition, adolescents who emphasize the importance of religion and prayer are at less risk of early sexual initiation and less likely to have frequent sexual intercourse.

However, in their study, Clayton, Ross and Kolbe (1997) observed a positive relationship between religiosity and sexual experience. They showed that adolescent males who value religious and moral beliefs highly were significantly more likely to have had sex in four weeks prior to the survey interview. Blank, George and London (1999) showed religious affiliation related to adolescent sexual behaviours.

With regard to the use of contraception, some Christian denominations oppose any form of [artificial] contraception as going against God's law. Islam, with its strong patriarchal history, considers contraceptive use a sin. Some believe that contraceptives are detrimental to health, reduce libido, and have side-effect like skin irritations, weight gain, swollen ovaries, nausea, and vomiting (Cleland & Ferry, 2005; Zelnick, 1998).

2.10. Services for adolescents

Population control is a key element in a country's ability to maintain and improve its economic and social welfare. Many governments have established policies or legislation to reduce population growth by means of preventing unintended pregnancies and allowing even minors to seek contraceptive and TOP services, including sexuality programmes (Maja, 2002).

2.10.1 Termination of pregnancy services (TOPs)

According to the WHO (2008), close to 17 million girls under the age of 18 give birth each year. Most of these pregnancies are unplanned and unintended and it is estimated that as many as 4.4 million abortions are sought by adolescent girls each year.

Illegal abortions often result in complications which may have negative consequences such as infertility and death. Accordingly to WHO (2008), unsafe abortions performed annually in Africa result in 13.0% of all maternal deaths. In their study in four public hospitals in Dar-es-Salaam, Otoide, et al., (2001) and Rosenzweig (2009) showed that about one third of women admitted with complications from illegal abortions were adolescents, 41.3% of whom were aged 17 years or younger. Silberschmidt and Rasch (2001) showed that the data on the extent of induced abortions are frequently unreliable because community-based surveys tend to produce gross underestimates, and under-reporting constitutes a major problem. Consequently, many aspects of adolescent girls' sexual behavior and why they have induced abortions are still under-explored. Since 1996 the majority of adolescent girls reporting for CTOPs in South Africa had started the procedure with backstreet abortionist, claiming that they could not afford to wait on long list before they could be attended to (Maja, 2002).

TOP services have not yet reached many of the adolescent girls in South Africa (Ehlers, et al., 2000). Health personnel should be encourage to be sensitive to the complexity of the problems that face the adolescent, particularly in social environments where family background, moral climate, and legal institutions impose undue stress on the adolescent girl (Whaley, 1999).

There has since the passing of CTOP Act been a decrease in deaths from backstreet abortions, but the number of deaths following abortions are still quite high according to statistics gathered

in Gauteng province where 5% of maternal deaths following childbirth were abortion related, and 57% of these were related to illegal abortions (Miscarriage, 2006).

A recent study in Soweto showed the following: the rate of abortions for women older than 20 years decreased from 15.2% in 1999 to 13.2% in 2001, the rate for women aged 16–20 decreased from 21% to 14.9%, and the rate for women aged 13–16 decreased from 28% to 23%. In 2001, 27% of abortions were second-trimester (Miscarriage, 2006).

2.10.1.1 Medical TOP services

The South African Child Care Act, 13 of 1999, as amended (South Africa, 1999), makes provision for children over the age of 14 years to consent to their own medical treatment without the permission of a parent or guardian. The term “medical treatment” includes the use of contraceptive and TOP services. Any person over the age of 18 years can consent to surgical procedures being performed on himself/herself without the consent of a parent or guardian.

The choice on Termination of Pregnancy Act, 92 of 1996 (South Africa, 1996) defines a woman as “a female of any age”. A female can sign her own consent for TOP. She does not need permission of her parent, guardian or husband to have a TOP service performed on her. This Act allows adolescents to sign their own consent in the event that they request a TOP. The sterilization Act, 44 of 1998 (South Africa, 1998) provides for the sterilization of any person over the age of 18 years if he or she is capable of consenting.

One of the conditions of the CTOP Act (South Africa, 1996) is that TOP should not be used as a contraceptive method, but as a last resort which should be procured at designated facilities. By 2000, 289 hospitals and clinic in the RSA were designated for termination of pregnancy, although only 59 actually had staff trained for this service (Bateman, 2000). From 1996 to 1999 between 150 000 and 155 024 legal abortions were performed across the country. From these statistics it could be concluded that:

- Women were making informed choice about their reproductive health.
- There is lack of education about reproduction and contraception where both male and females need to be fully informed about the utilization of contraceptives to avoid unwanted pregnancies.

Termination of pregnancy has social and psychological implications which could have long-term consequences for the woman, such as regret, anger, depression, ambivalence, shame and hatred towards parents and partners (Howson, Harrison, Hotra & Law, 2006; Webb, 2008).

Butler (1996) showed that many women suffered late psychological sequelae after CTOP, including severe depression, guilt feelings, blame and regret, which affected their daily lives. Health care providers involved with CTOP have been branded murderers and serial killers by colleagues and community members, especially ministers of religion (Poggenpoel, *et al.*, 1998).

2.10.2. Contraceptive services

Dyer and Tiggermann (2006) found that many people are afraid to discuss contraceptive issues with their parents. Some parents feared that information about contraception would lead to their children becoming promiscuous. Some of the adolescents pointed out that their parents had their parents had never told them about sex or contraception (Dyer & Tiggermann, 2006; Jones & Boonstra, 2005).

Access to and regular use of birth control methods is the goal of contraceptive services for adolescents. A university-organized project in South Carolina, USA, emphasizes information about contraceptives, and promotes consistent contraceptive use by sexually active teenagers (Montessoro & Blixen, 2006). This programme includes consultation with community leader, training teachers to provide sex education, mini-courses for parents, church and community leader, and the implementation of sex education at schools. Many parents provide misinformation about utilization of contraceptive, discouraging adolescents from using contraception (Eccles, *et al.*, 1997; Nicholas, 1998).

2.10.3 Life options programmes

Life options programmes attempt to expand adolescents' future goals and expectations by improving their educational and employment prospects. In the South Africa, Durham (1999), Goosen and Klugman (1996) as well as Heilman (1998) showed that most future-oriented, goal-directed adolescents were likely to postpone pregnancy to realize other goals first, reducing the rate of adolescent pregnancies. Programmes may be school- or community based and target risky population, such as low-income adolescents. Efforts are directed towards reducing social factors associated with increased adolescent pregnancy rate.

2.10. 4 School-based prenatal services

In many countries, school-based clinics are seen as a means of providing basic health care. In addition, school-based clinics deal with adolescents' complex health and social problems, particularly unintended pregnancies. These clinics often serve low-income adolescents with limited access to other sources of health care (Goosen & Klugman, 1996a).

Some adolescents are concerned about using family planning services with their parents and other older people (Goosen & Klugman, 1996b; Smith & Maurer, 2005). Bayona and Kanji-Murangi (1996) as well as Haram (1995) showed that most adolescents felt embarrassed at meeting their teacher, parents and any other person at family planning clinics. Many adolescents complain that health workers disapprove of and are not helpful to adolescents, despite their legal right to get contraceptives from clinics (Battle, 2000; Goosen & Klugman, 1996b).

In Sub Sahara Africa [SSA], Brookman (2000) as well as Cleland and Ferry (2005) showed that young people underutilize contraceptives services for various reasons, including lack of knowledge and stigmatization that they are sexually active. Young people are embarrassed and reluctant to use contraceptive clinic for the fear of the community's reaction towards them. Bateman (2000) as well as Campbell and Williams (1998) showed that reproductive health services provided to students at universities were highly utilized mainly because students were by themselves without the presence of other members of the community.

However, in Sub Sahara Africa (SSA), parents and community leaders maintained a hard line and insisted that the supply of contraceptives to adolescents promoted poor attitudes and values towards sex (Bayona and Kanji-Murangi, 1996). Family planning and other sex-related topics were rarely discussed among family members in the most SSA countries.

Bandura (1997) as well as Stephen and Morse (2003) are of the opinion that the government, politicians, church leaders and educators should use all available means, such as radio and public ceremonies, to educate all sectors of the society including parents about the use of reproductive health services. Parents and health professionals should influence adolescents to make use of sex education programmes by encouraging them and displaying positive attitudes towards sexually active adolescents and the use of contraceptives.

2.11 CONCLUSION

This chapter discussed the theoretical framework used in the study and the literature review undertaken by the researcher. The literature review provided insight into the complex and

multifaceted dynamics of secondary school learners' knowledge, attitudes and practices towards contraception.

CHAPTER 3

METHODS

This chapter outlines the research design and methodology, including the study population from which the sample was drawn, selection criteria, research instrument, ethical considerations and data analysis procedures.

3.1 Aim of the study

The aim of this study was to access the knowledge, attitudes and practices of contraception among high school students/learners in Tswaing sub-district of the North West Province, South Africa.

3.2 Objectives of the study

The objectives of the study were to:

1. To determine the knowledge, attitudes, practices of contraception among high school students in Tswaing Sub-district.
2. To explore the influence of demographic characteristics of students (e.g. gender, age) on their knowledge and attitude of contraception.

3.3 Research question

What is the knowledge, attitudes, practices of contraception among high school students in Tswaing Sub-district of the North-West Province?

3.4 Study design

This was a cross-sectional descriptive quantitative study; the research instrument was a research-administered questionnaire. It was conducted among Grade 10 to Grade 12 secondary school learners.

3.5 Study setting

This study was conducted at Tswaing Sub-district of the North-West Province, South Africa in August, 2009. Tswaing Sub-district has 15 high schools. Tswaing Sub-district is a local Municipality consisting of the towns of Delareyville, Sannieshof and Ottosdal in the Central District Municipality (Ngaka Modiri Molema district) situated in the North West Province of South Africa. The seat of government is at Delareyville with Municipal code of NW382. The sub-district has a total area of 5,966.3 km² and population (2001) of 114,155 with a density of 19.1/km².

Tswaing Sub-district is bordered by Mafikeng in the north-west, Lichtenburg in the north-east, Klerksdorp and Wolmaranstad in the South-east and Bophirima and Mamusa in the south-east.

This rural Sub-district has cultural and other barriers, such as long distances to clinic, lack of transport to health centres, clinic hours coinciding with school hours that could impact negatively on the effective use of contraceptives.

3.6 Study population

All high school learners in Tswaing Sub-district registered for the 2009 academic year constituted the study population. According to the statistics, averages of 2301 students are enrolled in the schools yearly. The highest number is 2772 so far. The total number of learners in

Tswaing at the time of sampling was 2710, and female learners accounted for 61.3%. The average number of under-sixteen years of age was 510.

3.7 Sampling frame and sample size

The formula used to calculate the sample size was: $n = Z^2pq / d^2$, where p was the prevalence, q was 1-p, d was sampling error, and Z was confidence interval. Using p = 18%, d= 5%, z = 95%, the sample size was 231. 33 students were selected from each school.

3.8 Sampling method and sampling procedure

A two-stage sampling technique was used. At the first stage, the names of the 15 secondary schools in Tswaing Sub-district were arranged in random order and every second name on the list was selected. 7 secondary schools were selected and one for the pilot study. The 7 schools were selected by random probability sampling; hence each school had a known and equal probability of being included. A list was compiled by contacting all the selected secondary schools and requesting them to supply the researcher with a list of students, names, date of birth and their addresses.

At the second stage, systematic sampling was employed to select the learners that participated in the study. From the lists, students were allocated numbered cards as they were registered at the school. The third students and every subsequent third student thereafter were included in the sample until the desired number per school was achieved. Replacements of participants who refused to participate were done by randomly selecting from the group in the sampling frame that had not been included in the study on the first round of selection.

3.9. Data collection materials, apparatus and instrument.

A questionnaire was developed. It included questions on knowledge of contraception, sexuality and reproductive functions, and on the participant's source of contraceptive information. The learners' attitudes towards using contraception were determined. The questionnaires were translated and printed in Setswana and Afrikaans. To ensure clarity and accuracy, two groups of translators were used for each language and the translations compared before a final translation was obtained. Questions were simple and concise. Ten males and 10 females from one school (excluded from the main study) took part in a pilot study and the questionnaires were amended. Data collection was conducted from 10th to 14th August, 2009. The questionnaires had no identifiers on them so that the information given was anonymous. Student identification papers, School registers and Black pens were used.

3.10. Exclusion criteria

Those students who are under sixteen years and those with improper registration for the academic year were excluded from this study.

3.11. Inclusion criteria

Students who were 16 years and above and equally present on the day of data collection were included in this study. To have been equally included in the study, the schools had to be situated in the Sub-district and under the jurisdiction of the Tswaing local Municipality. The participation was voluntary, and had to give informed consent for participation in the study.

3.12. Data collection

A coding system was used to ensure anonymity of a completed learner's questionnaire and his/her school. Schools were assigned with alphabetical codes [A to H] followed by sex of the learner [M/F]. After the completion of the questionnaires, the questionnaires were coded according to the name of school and sex of the learner. These were done by the researcher and the two field workers.

After explaining the study, the learners in each grade were enlisted on a voluntary basis. Informed consent was administered by the researcher and all participants signed the consent form prior to administration of the questionnaire. On the day that the questionnaires were administered, the learners were seated in a classroom and questionnaires were explained to them by me (the researcher). 2 nurses proficient in the local languages (Setswana, Afrikaans and English) were recruited, trained and used to distribute and assist with completion of the questionnaires.

The questionnaires were self administered and the 2 trained field workers helped in the explanation of the questions on the questionnaire to the needy learners to ensure clarity and accurate understanding. After completion, the questionnaires were collected by the two field workers and stored in a locked box.

3.13. Data analysis

Variables were knowledge, attitude, and practice of students regarding family planning and contraception. Data capturing and descriptive analysis were done using SPSS 17.0 software package and the services of a medical statistician for the descriptive statistics was employed. Data were presented using tables and graphs. Descriptive statistics and odd ratio, with 95%

confidence interval were used to show association between target variables. Chi-square test was used to test significance.

3.14 Reliability and validity

Reliability is “the degree of consistency or dependability with which an instrument measures the attribute it is designed to measure” (Polit & Hungler, 1999:256; Lobiondo-Wood & Haber, 2002:220). A reliable measure is one that can produce the same results if the behaviour is measured again with the same scale. According to Holmes (1996:38) as well as Martin (1997:160), a reliable measure is “one that maximizes the true scores and minimizes the error component”. Reliability was enhanced in several ways in this study.

- Questions were pretested and produced similar findings when compared to the main study.
- Data were collected by three people (the researcher and two research assistants) and in all instances produced similar findings.
- The researcher explained the instrument to the research assistants prior to the pre-testing phase to eliminate individual variations.
- The researcher assistants worked with young people at the reproductive health services in the sub-district.

Validity refers to the accuracy and truthfulness of scientific findings (Struwig & Stead, 2004; 136). Brook-Brunn (2000:42) refers to validity as “the degree to which a measure assesses what it purports to measure”. A valid study should demonstrate what actually exists and a valid instrument should measure what it purports to measure (Brink & Woods, 1998:299). According to Polit & Hungler (1999:255), reliability and validity depends on each other and a “measuring device that is not reliable cannot possibly be valid”.

The following steps were taken to ensure the validity of this study:

- The learners were drawn from the three towns or regions of Tswaing local municipality and Grade 10 to Grade 12 female and male adolescents from the randomly sampled secondary schools.
- The literature was examined to identify variables to be delineated.
- The researcher's supervisor examined each item for its appropriateness to the research questions.
- The data-collection instrument was pre-tested with 20 learners who did not participate in the main study.
- The questionnaires were administered to learners on the days that they were not writing an examination.

Wilson (1993:240) emphasizes the validity should be evaluated against four measures: inter-rater, content, concurrent and semantic validity.

In this study, validity was enhanced by:

- Impartial expert scrutiny of the questionnaires led the researcher to include additional items that would provide extra pertinent information about the learners' contraceptive knowledge, perceptions, attitudes and practices. Inter-rater validity was further enhanced by inviting an independent statistician to analyze the research results.
- The concern for content validity of the instruments was pursued with the assistance of five professional nurses working at the family planning clinics, and three colleagues who reviewed the questionnaires and the research questions independently, and agreed that the items represented the objective of the study. The questionnaires were modified on the advice of these colleagues with expertise in the contraceptive field, thereby enhancing the validity of the instrument (De Vos, 2001).
- Concurrent validity was ensured by comparing the findings between the male and female participants as the questions were similar, but gender specific. Nevertheless, similar responses were obtained from the males and the females.
- Semantic validity was enhanced by categories being mutually exclusive and exhaustive, as judged by the statistician consulted after the questionnaires had been completed.

3.15 Bias

According to Burns and Grove (1997:228), bias means “to slant away from the true or expected”. Woods and Catanzaro (1998:319) define bias as “a systematic distortion of responses by the researcher, the respondents or the instrument” Bias was of great concern in this research because of the potential effect on the meaning of the study findings. In order to minimize bias in this study, the following steps were taken:

- Selection bias may have occurred due to limitation of study site to only schools in Tswaing Sub-district and selection of only the available students at the time of giving the questionnaires, but the relative homogeneity and class dynamism of the province and the accessibility of this district as a major sub-district in the central district of the North-West province was expected to reduce this.
- Sampling bias was reduced by using a two-stage sampling technique to ensure each school and student had a known and equal probability of being included. One of the research assistants did the systematic sampling of the participating secondary school learners in the presence of the researcher.
- The researcher used the services of two research assistants to reduce the positive impact of one researcher’s potential bias.
- Design biases were reduced to avoid faulty designs, methods and inappropriate techniques of analysis by using a statistician and the use of my supervisor.
- Evaluation apprehensions due to anxiety generated in people by virtue of being tested were reduced by talking to them to relax while still stressing on the importance of the research.
- Reactive effect or Hawthorne (‘guinea pig’) effect was avoided as they were denied knowledge of the research until the day of the fieldwork and moreover, the sites of research had not been over researched.
- The study was conducted in all of the towns of Delareyville, Sanniesoff and Ottosdal at 7 schools involving 231 secondary school learners.

Validity, reliability and bias were maximized by conducting a literature study, using conceptual framework [the HBM], and establishing congruence between research questions, objectives, findings and recommendations (Carter, 1996).

3.16 Ethical considerations

Ethics is “a system of moral values concerned with the degree to which research procedures adhere to professional, legal and social obligations” (Polit & Hungler, 1999:649; Talbot, 1995:277).

Ethical issues considered during this study included obtaining permission from the relevant authorities and the prospective learners, respectively to conduct the research, anonymity, and respect for human dignity, confidentiality, beneficence and justice.

The researcher obtained permission to conduct the study from:

- The Departmental Research Committee of the Department of Family Medicine & PHC of the University of Limpopo (Medunsa Campus)
- The Medunsa Research and Ethics Committee of University of Limpopo, Medunsa Campus. MREC Number of the clearance certificate is Project Number: MCREC/M/27/2008:PG.
- Policy, Planning and Research Directorate, North West Provincial department of Health.
- The relevant authorities from the NWP’s department of Education.
- The Principals of the selected secondary schools in the Sub-district. They were informed in writing, and physically about the aims and objectives of the study and also supplied with copies of permission granted by the relevant departments to conduct the survey.
- Each participating learner [Grade 10 to Grade 12 learners] was informed about the purpose, significance and benefits of the study, and the time required to complete the questionnaire. Each participant signed an informed consent form prior to participation. Each participant received a covering letter together with a questionnaire for completion.

- In order to maintain confidentiality and anonymity, the learners were asked NOT to write their names on the questionnaires.

The learners were assured that no names of the learner or schools would be disclosed and all information received would be treated in utmost confidentiality at all times.

Participation by each learner remained voluntary. The researcher respected the principle of self-determination which meant that each learner had the right to decide voluntarily whether or not to participate in the research (Polit, *et al.*, 2001). There were no minor in this research.

In this study, confidentiality was maintained and confirmed by the following:

- A coding system was used to ensure anonymity of the learners in each school. This is as show in Appendix D.
- Neither the learners' parents nor the teachers could gain access to the raw data of the research. For example, upon receipt of the completed questionnaires, they were placed into sealed boxes, which were handled by the researcher only.
- The learners were informed that they had the right to withhold information or discontinue completing the questionnaires at any stage without incurring any negative consequences.
- The learners were informed prior to participating in the study that the data collected would be used only for the purpose for which it had been approved and collected. Based on the research report, improved contraceptive services and education programmes for learners in the NWP could be recommended and instituted.
- No specific person would be mentioned in the research report.
- The completed questionnaires would be kept under lock and key. Only the researcher and the statistician had access to the completed questionnaires. The researcher would safely store them for 5 years once the research report had been completed.

The principle of beneficence is concerned with maximizing benefits and doing no harm, and includes freedom from harm and exploitation and the risk: benefit ratio (Burn & Grove 2001). With regards to freedom from harm, the study inflicted no physical harm by participating in the study. Psychological discomfort might have resulted from the nature of the question asked as

was observed from some of the completed questionnaires. All selected learners in this research were given my phone number and address, so as to be consulted in case of debriefing of participants. Materials such as journals, books were made available to any concerned student needing any clarification and help. The services of other health care workers [senior nurses, medical social workers and the Sub-district psychologist were employed. Some of my trained field-workers were able to debrief any participant in the language that he /she would understand.

The risk: benefit ratio implied that no psychological discomfort was anticipated to result from answering the questions. The benefit was that the learners' contraceptive knowledge, attitude and practices would be used to improve policies for providing improved contraceptive services to learners in the NWP.

The principle of justice includes the learners' right to fair selection and privacy (Bowling, 1997:158). In this study, the selection of the sample was conducted accordingly to eligibility criteria. Privacy is "the right an individual has to determine the time, extent and conditions under which private information will be shared with or withheld from others" (Brink, 1996:40). The researcher ensured the learners' privacy by explaining the purpose, objectives and significance of the study, obtaining their informed consent to voluntarily participation and share private information with the researcher, and assuring them of anonymity and confidentiality.

A protocol was adhered to, however logistics demanded some laxity in timing, but the content and accuracy of the data remained unaffected.

CHAPTER 4

RESULTS

4.1 Introduction

Two hundred and thirty one questionnaires were distributed to seven different schools and all were received back, giving a response rate of 100%. Although, the students were generally very enthusiastic and cooperative to take part in the survey, some questions were left blank / or had frivolous answers or falsification and were excluded from the analysis.

The completeness of the responses varied from question to question, consequently, the total number of the students who actually answered a given question, rather than the overall sample size in the study, were sometimes used in calculations.

4.2 Data analysis and interpretation

Demographic Information (n=231 respondents). The demographic characteristics are summarized in table 1 below. A total of 231 participants from 7 different schools were interviewed. As shown in Appendix D, thirty-three learners from school [A], 33 learners from school [B], 33 learners from school [D], 33 learners from school [E], 33 learners from school [F], 33 learners from school [G], and 33 learners from school [H].

101(43.7%) male and 130(56.3%) female learners in Grade 10-12 completed the questionnaire. School A had 12(36.4%) male and 21(63.6%) female, School B had 13(39.4%) male and 22(60.6%) female, School D had 18(54.5%) male and 15(45.5%) female and School E had 16(48.5%) male and 17(51.5%) female, School F had 18(53.8%) male and 15(46.2%) female,

School G had 19(57.6%) male and 14(42.4%) female, and School H had 11(33.3%) male and 22(66.7%) female. The age range was 16 – 24 years with a mean of 19.7+/-2.5 years. Of the males, 83 learners were aged 16-21 years and 117 of the females were aged 16-21 years.

Ninety percent of the respondents were black and majority were Christian. Twenty eight (84.8%) from School A, 31(93.9%) from School B, 28(84.8%) from School D, 26(78.8%) from School E and 29(87.9%) from School F, 32(97.0%) from School F, and 32(97.0%) from School H, 32(97.0%) had no pregnant in the past. A few 8(8.2%male) admitted to having fathered a child and 18(13.8%) of the females had previous pregnancies.

Table 1: Demographic Information (n=231)

Variables	A	B	D	E	F	G	H
Gender							
Male	12(36.4%)	12(39.4%)	18(54.5%)	16(48.5%)	18(54.5%)	19(57.6%)	11(33.3%)
Female	21(63.6%)	21(60.6%)	15(45.5%)	17(51.5%)	15(45.5%)	14(42.4%)	22(66.7%)
Age in year							
16 – 18	10 (30.3%)	21(63.7%)	25(75.7%)	11(33.3%)	15(45.5%)	20(60.6%)	21(63.6%)
19 – 20	12(36.4%)	5(15.2%)	2(6.1%)	10(30.3%)	10(30.3%)	4(12.1%)	9(27.3%)
21 and above	11(33.3%)	7(21.2%)	6(18.2%)	12(36.4%)	8(24.2%)	9(27.3%)	3(9.1%)
Religion							
Christianity	23(69.7%)	24(72.7)	19(57.6%)	20(60.6%)	26(78.8%)	17(51.5%)	33(100%)
Islamic	5(15.2%)	5(15.2%)	4(12.1%)	5(15.2%)	0(0%)	10(30.3%)	0(0%)
Traditional	1(3%)	3(9.1%)	6(18.2%)	8(24.2%)	7(21.2%)	4(12.1%)	0(0%)
Others	4(12.1%)	1(3%)	4(12.1%)	0(0%)	0(0%)	2(6.1%)	1(3%)
Pregnant in the past							
Yes	5(15.2%)	2(6.1%)	5(15.2%)	7(21.2%)	4(12.1%)	1(3%)	1(3%)
No	28(84.8%)	31(93.9%)	28(84.8%)	26(78.8%)	29(87.9%)	32(97.0%)	32(97.1%)

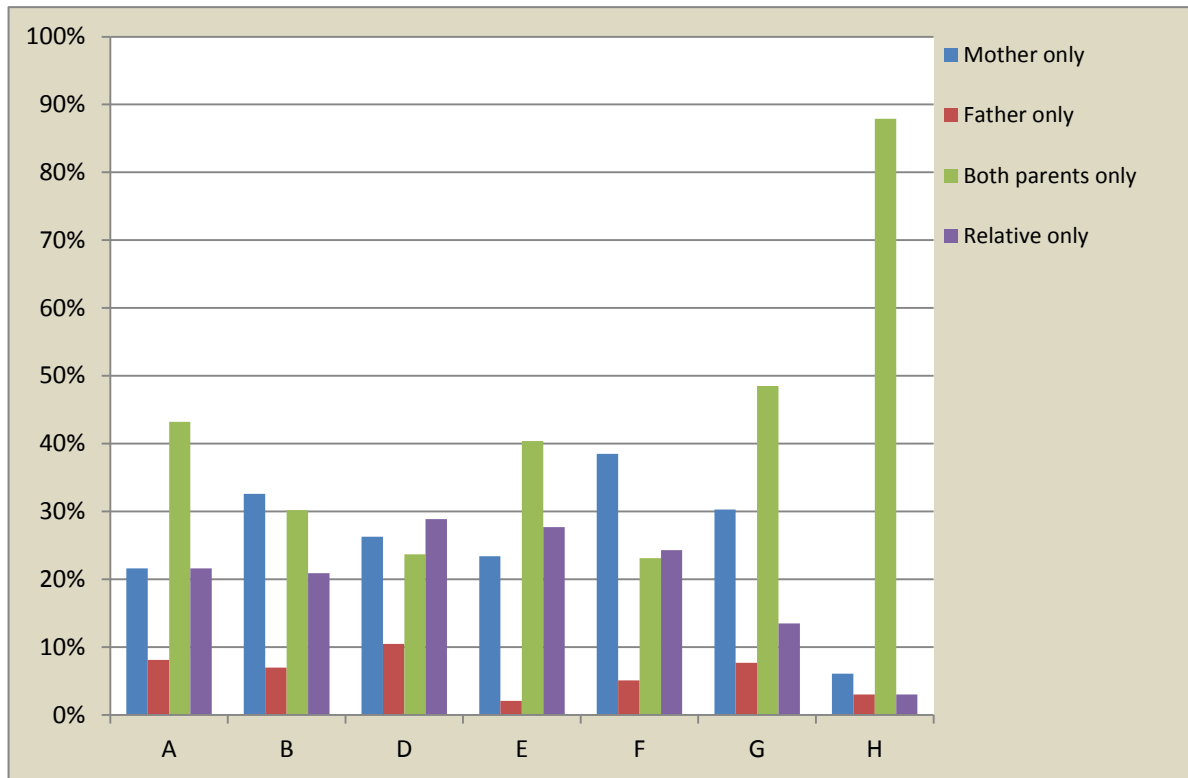


Figure 1: Distribution of people they live with (all sec. schools that participated).

Most learners lived with one or both parents [40(17.3%) of male and 72 (31.2%) of the females]. Figure 1 above shows that at School A (14/33) 42.4% lived with both parents and (8/33) 24.2% lived with their mothers, at School B (12/33) 36.3% lived with their mothers and (11/33)33.3% lived with their fathers, at School D (10/33) 27.3% lived with both parents and (11/33) 33.3% lived with their relatives, at School E (10/33) 30.3% lived with both parents and (12/33) 36.4% lived with their mothers, at School F (8/33) 24.2% lived with both parents and (13/33) 39.4% lived with their mothers, at School G (6/33) 48.5% lived with both parents and (10/33) 30.3% lived with their mothers, at School H (29/33) 87.9% lived with both parents and (2/33) 6.1% lived with their mothers.

4.3 Sexual maturation and sexual behaviour

The mean age for Semenarche and menarche (all learners that participated) was 14.6 years and 14.6 years respectively [Range of 14-15 years with percentages from 9.1% - 45.5%]. Almost 70% of the males and 60% of females indicated that they had girlfriends or boyfriends. Many more males 88 (50.3%) than females 87 (49.7%) indicated that they had engaged in sexual intercourse. Many of the adolescents in this study were sexually active; with an average age at first intercourse of 14.9 years for the males and 15.4 years for the females. Modal age at first intercourse is below 13 years for males and female is 16 years.

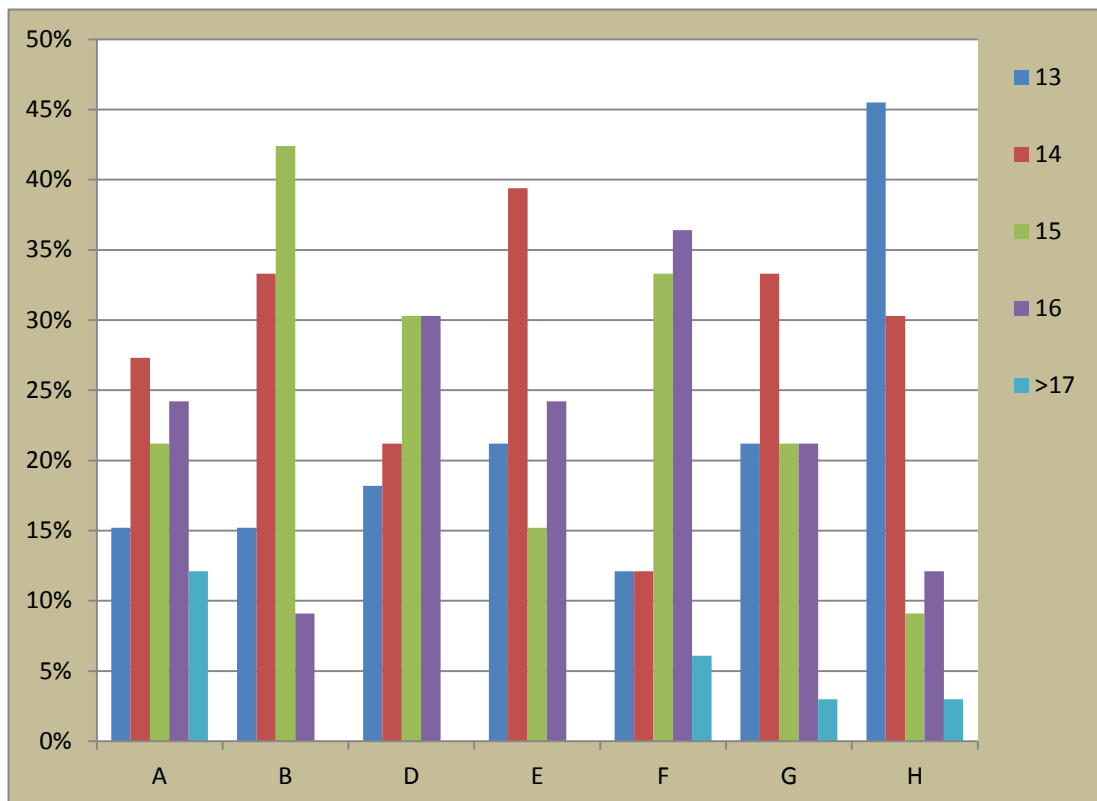


Figure 2: Mean age of the learners at Semenarche and Menarche.

4.4 Prevalence of contraception

Of those who indicated that they had sexual intercourse, 61.5% [54/88]100, of the males and 93% [81/87]100, of the females indicated that they used contraception.

According to their knowledge, the most common form of contraception used by females was the Combined Injectable contraceptives [CICs] (49.4%). The most common contraceptive used by males were condoms (89.8%). Majority of the participants [males 63(63.6%) and females 86(68.8%)] agreed that it was easy to get hold of contraceptives except School B with 18/33(54.5%) and School F with 21/33(63.6%). They claimed that it was not easy for them to get hold of contraceptives. Some learners indicated the use of contraceptive pill by males. This may be due to lack of knowledge or apprehension bias.

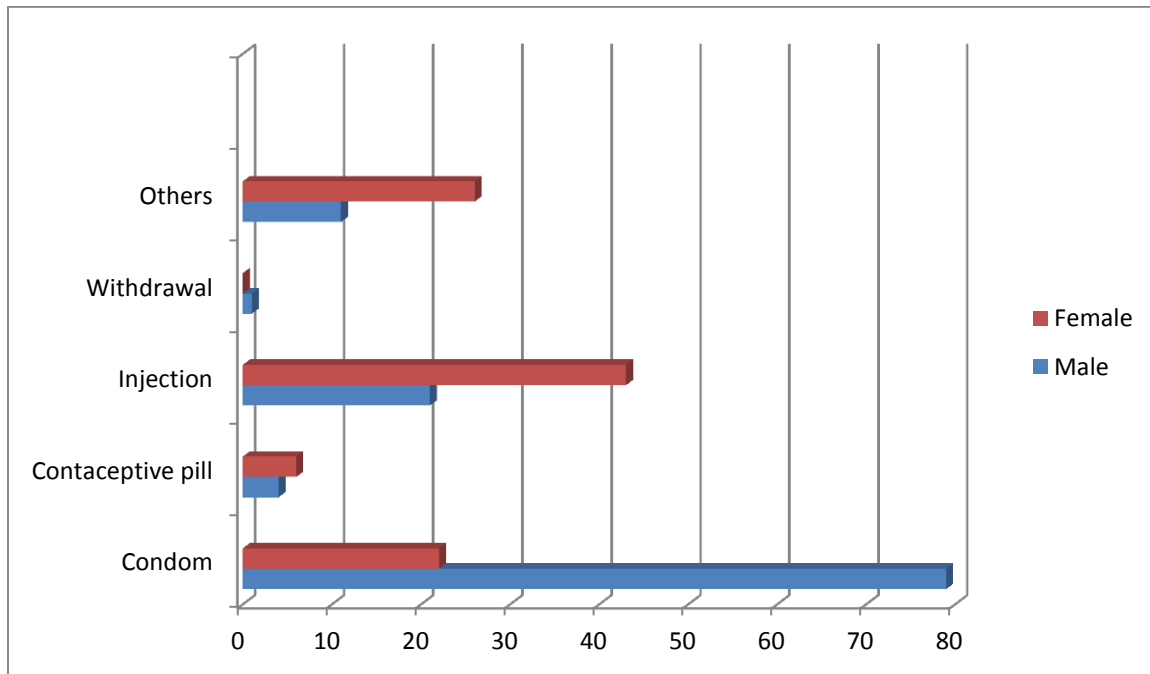


FIGURE 3: Types of Contraceptive used.

The frequency of contraceptive use by those who have had intercourse is given in figure below.

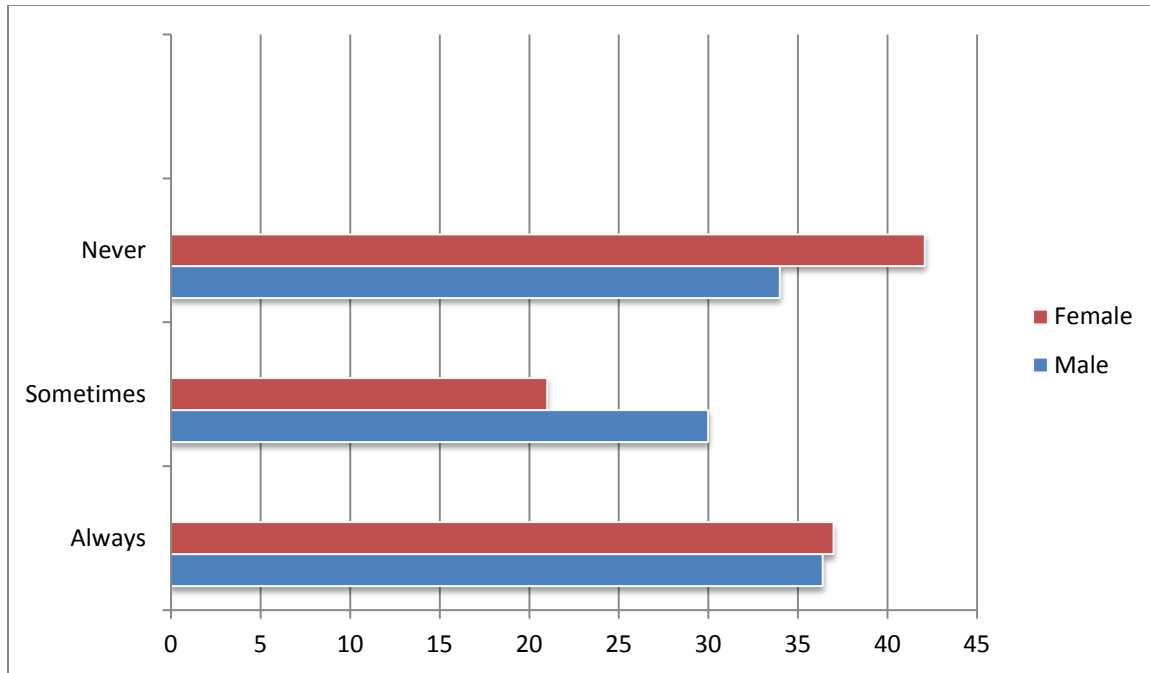


FIGURE 4: Frequency of contraceptive use

Only 36.4% of the males and 36.8% of the females always used contraception.

4.5 Source of information on contraception

In all schools, source of information on contraceptive use were from their parents. Source of information that they preferred were from doctors. The preferred source of contraceptive information for the male students were from doctors (59[59%] male), and the preferred source of contraceptive information for the female students were from their parents 57[43.8%]. Only 54[57.4%] of the males and 86[75.4%] of females indicated that their parents had discussed contraception with them. 64.2% of males and 68.5% of the females were satisfied with the information they received about contraception from their parents.

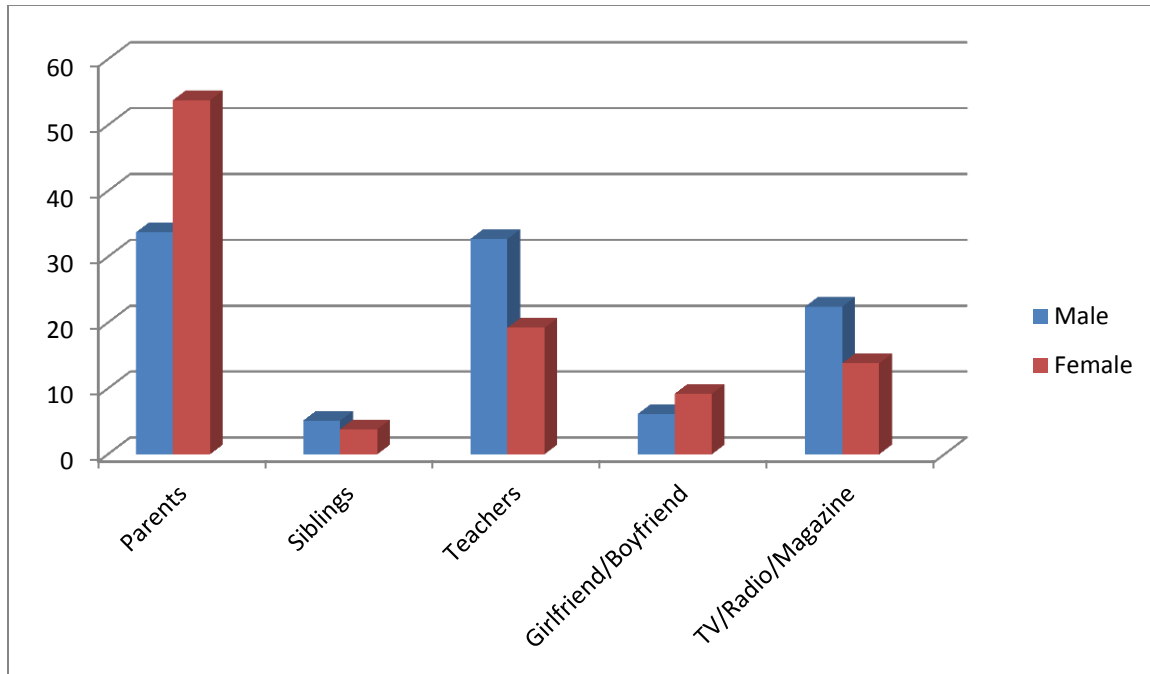


FIGURE 5: Source of Information on contraception

4.6 Knowledge of contraception and sexuality

All schools were aware that condoms can prevent sexually transmitted infections (72.7% - 93.9%). Most participants, 83(83%) of the males and 113[86.9%] of the females knew that condom use prevented sexually transmitted infections. When asked whether condom can be used more than once they disagreed (69.7% - 87.9%); 74[73.3%] of all males and 100[76.9%] females. Among the female participants, only 79[60.8%] knew that contraception could take place if they had missed their pill once. 51[39.2%] said that conception could not take place if they had missed taken their pill once. **See Table 2**

TABLE 2: Knowledge of contraception

Sec.school	A	B	D	E	F	G	H
Variables	No %	No %	No %	No %	No %	No %	No %
Female common contraception							
Pills	8(24.2%)	9(27.2%)	4(12.1%)	2(6.1%)	12(36.4%)	7(21.2%)	7(21.2%)
Injectable	8(24.2%)	15(45.5%)	4(12.1%)	5(15.2%)	4(12.1%)	16(48.4%)	20(60.6%)
Copper T	11(33.3%)	8(24.2%)	5(15.2%)	10(57.6%)	15(45.5%)	8(24.2%)	3(9.1%)
Natural methods	6(18.2)	1(3.1%)	20(60.6%)	7(21.2%)	2(6.0%)	2(6.1%)	3(9.1%)
Male common contraception							
Condom	20(60.6%)	27(81.8%)	23(69.7%)	30(90.9%)	30(90.9%)	27(81.8%)	33(100%)
Vasectomy	4(12.1%)	2(6.1%)	3(9.1%)	2(6.1%)	2(6.1%)	2(6.1%)	0(0%)
Spermicides	5(15.2%)	1(3.0%)	1(3.0%)	1(3.0%)	0(0%)	1(3.0%)	0(0%)
Withdrawal	2(6.1%)	0(0%)	3(9.1%)	0(0%)	0(0%)	2(6.1%)	0(0%)
Injectable	1(3.0)	3(9.1%)	2(6.1%)	0(0%)	1(3.0%)	1(3.0%)	0(0%)
Periodic Abstinence	1(3.0%)	0(0%)	1(3.0%)	0(0%)	0(0%)	0(0%)	0(0%)
Can get hold of contraceptives							
Yes	23(69.7%)	15(45.5%)	15(45.5%)	27(81.8%)	12(36.4%)	26(78.8%)	24(72.7%)
No	10(30.3%)	18(54.5%)	18(54.5%)	6(18.2%)	21(63.6%)	7(21.2%)	9(27.3%)
Source of Information on Contraception							
Parents	14(42.4%)	10(30.3%)	19(57.6%)	19(57.6%)	1(3%)	1(3%)	1(3%)
Siblings	1(3.0%)	0(0%)	2(6.1%)	2(6.1%)	2(6.1%)	5(15.2%)	5(15.2%)
Teachers	3(9.1%)	15(45.5%)	7(21.2%)	3(9.1%)	2(6.1%)	11(33.3%)	3(9.1%)
Boyfriend/ Girlfriend	8(24.2%)	2(6.1%)	1(3.0%)	9(27.3%)	11(33.3%)	0(0%)	5(15.2%)
T.V/Radio/ Magazine	7(21.2%)	6(18.2%)	4(12.1%)	0(0%)	17(51.5%)	16(48.5%)	19(57.5%)
Preferred source of Information							
Parents	10(30.3%)	10(30.3%)	11(33.3%)	16(48.5%)	15(45.5%)	6(18.2%)	18(54.5%)
Doctors	22(66.7%)	23(69.7%)	17(51.5%)	16(48.5%)	14(42.4%)	25(75.8%)	6(18.2%)
Condom prevents sexually transmitted infections							
Yes	24(72.7%)	33(100%)	30(90.9%)	31(93.9%)	28(84.8%)	31(93.9%)	28(84.8%)
No	9(27.3%)	0(0%)	3(9.1%)	2(6.1%)	5(15.2%)	2(6.1%)	5(15.2%)
Condom can be used more than once							
Yes	10(30.3%)	5(15.2%)	6(18.2%)	5(15.2%)	6(18.2%)	7(21.2%)	4(12.1%)
No	23(69.7%)	28(84.8%)	27(81.8%)	28(84.8%)	27(81.8%)	28(78.8%)	29(87.9%)
If woman misses taking her pill, can pregnancy occur?							
Yes	18(54.5%)	32(97.0%)	17(51.5%)	28(84.8%)	18(54.5%)	11(33.3%)	23(69.7%)
No	15(45.5%)	1(3.0%)	16(48.5%)	5(15.2%)	15(45.5%)	22(66.7%)	10(30.3%)

4.7 Interpretation of attitude on contraception

Table 3 below shows students when asked whether they would prefer to have sex if their partners want to have sex without contraception, majority of all schools disagreed [their response ranges from 17yrs – 24yrs] with 51.5% - 93.9%. All students also approved that of their partner's use of contraception.

There was a high rate of unprotected sexual activity among the respondents, with 34.1% of the males and 42.1% of the female indicating having had sex without contraception. The reasons given for the lack of contraceptive use included ignorance about contraception (36.5% male, 44.7% female), unavailability (39.7% male, 21.3% female), partner did not want it (22.2% male, 29.8% female), and not thinking about contraception at the time of sexual activity (1.6% male, 4.3% female). Of all the participants, most males (32.5%) stated that they would prefer not to have sex if their girl friend wanted to have sex without contraception, compared with 43% of females. Among the male participants, 6.5% did not approve of their girlfriend use of contraception, 35.9% approved and 57.6% were unsure. Among the females, 28[12.9%] did not approve, 82 [37.8%] approved. The reason for not approving included the fear of: contraception causing sterility 23[14.6%], making the girlfriend promiscuous 16(10.1%), losing control over the girlfriend 14(8.9%) and having less enjoyable sex 11(7%). The lowest response for not being in favour of their girlfriend using contraception was the desire to have a baby in order to prove their manhood 11(7%).

Table 3: Attitudes towards contraception

Sec.school	A	B	D	E	F	G	H
Variables	No %	No %	No %	No %	No %	No %	No %
Sex without contraception							
Yes	9(27.3%)	1(3.0%)	7(21.2%)	14 (42.4%)	5(15.2%)	2(6.1%)	8 (24.2%)
No	24 (72.7%)	32(97%)	26 (78.8%)	19 (57.6%)	28 (84.8%)	31 (93.9%)	25 (75.8%)
Approval of your partner's use of contraception							
Approved	25 (75.8%)	33(100%)	30 (90.9%)	21 (63.6%)	23 (69.7%)	21 (63.6%)	19 (57.6%)
Do not approve	7(24.2%)	0(0%)	3(9.1%)	12 (36.4%)	10 (30.3%)	12 (36.4%)	14 (42.4%)
If you disapprove, What reason?							
Fear of contraception	9(27.3%)	7(21.2%)	14 (42.4%)	8(24.2%)	3(9.1%)	10 (30.3%)	4 (12.1%)
Promiscuous	6(18.2%)	12(36.4%)	7(21.2%)	3(9.1%)	1(3.0%)	10 (30.3%)	4 (12.1%)
Losing control	3(9.1%)	6(18.2%)	2(6.1%)	4(12.1%)	2(6.1%)	4(12.1%)	5(15.2%)
Less enjoyable	3(9.1%)	7(21.2%)	6(18.2%)	13(39.4%)	1(3.0%)	3(9.1%)	2(6.1%)
Causes sterility	2(6.1%)	1(3.0%)	4(12.1%)	3(9.1%)	7(21.2%)	3(9.1%)	9(27.3%)
No answer	10(30.3%)	0(0%)	0(0%)	2(6.1%)	26(78.8%)	3(9.1%)	9(27.3%)

Majority of the respondents practiced their first sexual intercourse when they were 15 and 17 years old and above. All schools (9–25 participants) 27.3%-75.8% responded positively that they used contraceptives on their first sexual intercourse. Between 16–25 (48.5% - 75.8%) respondents agreed that parents discussed contraceptive with them.

About 90% used condoms when they had sexual intercourse. More than 40% of respondents agreed that they sometimes and always had sexual intercourse with other people with contraception. More than 90% respondents wanted information on contraception from their primary health care workers. See table 2, 3, 4 above. See table 4 below.

4. Distribution of Practice on contraception

Sec. school	A		B		D		E		F		G		H	
Variable	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Age in years first sexual intercourse														
Below 13	6	(18.2%)	3	(9.1%)	8	(24.2%)	3	(9.1%)	2	(6.1%)	8	(24.2%)	3	(9.1%)
14	3	(9.1%)	2	(6.1%)	7	(21.2%)	5	(15.2%)	4	(12.1%)	4	(12.1%)	3	(9.1%)
15	4	(12.1%)	10	(30.3%)	4	(12.1%)	7	(21.2%)	5	(15.2%)	4	(12.1%)	0	(0%)
16	4	(12.1%)	11	(33.3%)	6	(18.2%)	10	(30.3%)	6	(18.2%)	6	(18.2%)	4	(12.1%)
17and above	12	(36.4%)	7	(21.2%)	6	(18.2%)	7	(21.2%)	17	(51.5%)	10	(30.3%)	2	(6.1%)
No answer	4	(12.1%)	0	(0%)	2	(6.1%)	1	(3.0%)	16	(48.5%)	1	(3.0%)	21	(63.6%)
Contraception on your first sexual intercourse														
Yes	18	(54.5%)	27	(81.8%)	20	(60.6%)	16	(48.5%)	18	(54.5%)	20	(60.6%)	9	(27.3%)
No	13	(39.4%)	6	(18.2%)	13	(39.4%)	16	(48.5%)	3	(9.1%)	11	(33.3%)	9	(27.3%)
No answer	1	(3.0%)	0	(0%)	0	(0%)	1	(3%)	12	(36.4%)	2	(6.1%)	15	(45.5%)
Parents discuss contraception with you?														
Yes	23	(69.7%)	16	(48.5%)	27	(81.8%)	11	(33.3%)	26	(78.8%)	24	(72.2%)	21	(63.6%)
No	10	(30.3%)	17	(51.5%)	6	(18.2%)	22	(66.7%)	7	(21.2%)	9	(27.8%)	12	(36.4%)
If yes, are you satisfied with information received from your parents?														
Yes	23	(69.7%)	18	(54.5%)	24	(72.7%)	17	(51.5%)	1	(3.0%)	9	(27.3%)	7	(21.2%)
No	10	(30.3%)	15	(45.5%)	7	(21.2%)	16	(48.5%)	18	(54.5%)	20	(60.6%)	6	(18.2%)
No answer	23	(69.7%)	18	(54.5%)	24	(72.7%)	17	(51.5%)	15	(42.5%)	4	(12.1%)	20	(60.6%)
Have a girl friend/ or boyfriend?														
Yes	23	(69.7%)	24	(72.7%)	21	(63.6%)	26	(78.8%)	21	(63.6%)	25	(75.8%)	18	(54.5%)
No	10	(30.3%)	9	(27.3%)	12	(36.4%)	7	(21.2%)	12	(36.4%)	8	(24.2%)	15	(45.5%)
If yes you have had sexual intercourse, did you use contraception?														
Yes	8	(24.2%)	12	(36.4%)	11	(33.3%)	13	(39.4%)	1	(3.0%)	9	(27.3%)	7	(21.2%)
No	20	(60.6%)	20	(60.6%)	17	(51.5%)	20	(60.6%)	18	(54.5%)	20	(60.6%)	6	(18.2%)
No answer	5	(15.2%)	1	(3.0%)	5	(15.2%)	0	(0%)	15	(42.5%)	4	(12.1%)	20	(60.6%)
Have you been having sexual intercourse with other people with contraception?														
Always	13	(39.4%)	15	(45.5%)	9	(27.3%)	9	(27.3%)	7	(21.2%)	6	(18.2%)	0	(0%)
Sometimes	10	(30.3%)	8	(24.2%)	5	(15.2%)	12	(36.4%)	4	(12.1%)	6	(18.2%)	2	(6.1%)
Never	8	(24.2%)	10	(30.3%)	17	(51.5%)	12	(36.4%)	8	(24.2%)	7	(21.2%)	3	(9.1%)
No answer	2	(6.0%)	0	(0%)	2	(6%)	0	(0%)	14	(42.4%)	14	(42.4%)	28	(84.8%)
Lack of contraceptive use is:														
Ignorance	15	(45.5%)	16	(48.5%)	10	(30.3%)	9	(27.3%)	7	(21.2%)	6	(18.2%)	0	(0%)
Unavailability	4	(12.1%)	9	(27.3%)	11	(33.3%)	3	(9.1%)	4	(12.1%)	6	(18.2%)	2	(6.1%)
Partners didn't want it	4	(9.1%)	7	(21.2%)	6	(18.2%)	13	(39.4%)	8	(24.2%)	7	(21.2%)	3	(9.1%)
No answer	10	(30.3%)	1	(3.0%)	6	(18.2%)	8	(24.2%)	14	(42.4%)	14	(42.4%)	28	(84.8%)
Yes	32	(97.0%)	29	(87.9%)	30	(90.9%)	31	(93.9%)	7	(21.2%)	6	(18.2%)	0	(0%)
No	1	(3.0%)	4	(12.1%)	3	(9.1%)	2	(6.1%)	4	(12.1%)	6	(18.2%)	2	(6.1%)
Information on contraception from primary health care workers														
Yes	32	(97.0%)	29	(87.9%)	30	(90.9%)	31	(93.9%)	30	(90.9%)	33	(100%)	20	(60.6%)
No	1	(3.0%)	4	(12.1%)	3	(9.1%)	2	(6.1%)	3	(9.1%)	0	(0%)	13	(39.4%)

Table 5: Association of various variables with knowledge, attitude and practice

Variables	Gender		Odds-Ratio	95% Confidence interval		Chi-test	P-Value
	Male	Female					
Condoms can prevent sexually transmitted infections							
Yes	83(36.1%)	113(49.1%)	0.7	0.35	1.52	4.89	0.05
No	17(17.4%)	17(7.4%)					
Condom can be used more than once							
Yes	27(11.7%)	30(13.0%)	1.2	0.66	2.21	6.47	0.04
No	74(32.0%)	100(75.3%)					
Have sex without contraception							
Yes	26(11.4%)	33(13.1%)	1.2	0.66	2.10	6.32	0.04
No	74(32.5%)	98(43.0%)					
Have girlfriend/boyfriend							
Yes	81(80.2%)	104(80.0%)	1.013	0.528	1.942	6.01	0.05
No	20(19.8%)	26(20.0%)					
What did you use?							
Condoms	48(47.5%)	78(60%)	3.56	0.05	0.604	9.56	0.00
Nothing	53(50.5%)	53(49.5%)					
Wants information on contraception from primary health care workers?							
Yes	86(86%)	105(82%)	1.346	0.653	2.773	7.92	0.03
No	14(14%)	26(18%)					

A chi-square test was performed to determine association between predictor's variables and knowledge. A p-value of less than 0.05 determines the statistical significance. All the school learners had the knowledge that condoms can prevent sexually transmitted infections and that a condom cannot be used more than once, with a $p < 0.05$ and their response according to gender and age, all schools had more than 60% participants. Forty-three percent of the respondents in all schools who lived with both parents had the knowledge that condoms can prevent sexually transmitted infections and condom cannot be used more than once, $p < 0.05$.

It is statistically significantly true that they would not prefer to have sex if their partners wanted to have sex without contraception and approved of their partner's use of contraception, $p < 0.05$ in all schools. In about six schools, learners had their first sexual intercourse when they were still young and in their mid-teens and in 48% of respondents, who lived with only their mother had sex when they were 15 years (mean 2.11 ± 1.65 , $\chi^2 = 23.5$, $p = 0.000$).

About 78.5% male and 94.3% female approved of their partner's of contraceptive use (mean 1.97 ± 1.23 $\chi^2 = 18.03$, $p = .000$). Majority of them had contraceptives on the first sexual intercourse, they also discuss contraceptives with parents and they get information on contraception from primary health care workers in about 75% in all schools (mean = 2,901 ± 1.56 , $\chi^2 = 25.56\%$, $p = 0.000$).

CHAPTER 5

DISCUSSION

5.1 INTRODUCTION

This chapter 5 presents the discussion based on the research findings of this study about the knowledge, attitudes and practices of contraception among Grade 10 to Grade 12 secondary school learners in Tswaing Sub-district. This is an interaction of literature, methods and results. Following the analysis and interpretation of data, the objectives and assumptions were correlated with the results to determine relationships among various variables. Limitations were also identified and a number of comments were made with regard to these secondary school learners' knowledge about, attitudes towards contraception and contraceptive use.

5.2.1 Method and critique

A non-experimental, quantitative, descriptive design was chosen to obtain more information about contraceptive practice and examine their relationships to identify and suggest improved contraception for high school learners in Tswaing Sub-district of the NWP, South Africa. A descriptive design was used to describe the learner's contraceptive knowledge, prevailing contraceptive practices, "...providing a picture of the situation as it naturally happens" (Burns & Grove, 2001:268). Descriptive research attempt to describe something, e.g. the demographic characteristics providing a complete and accurate description of a situation. A quantitative approach was used to enquire about learner's contraceptive practices and to use statistical procedures to analyze and interpret the significance of variables affecting contraceptive practices. The researcher wishes to generalize results beyond the confines of the research sample. A great deal of attention was paid to sampling issues and representativeness of the samples. This study can be replicated hence the research process was specified in detail; how many male

learners and female learners in each sample. In quantitative research, the individual is the focus of the empirical inquiry. Questionnaires were self-administered to individuals and the individual's (not the group) response were required. The individuals' responses were then aggregated to form overall measures for the sample. Unlike, qualitative study, there is no flexibility and no use of theories. The self-administered or postal questionnaire is less of a social encounter than interview methods, eliminates the problem of interviewer bias and is useful for sensitive topics, as there is more anonymity. However, the method is only suitable when the issues and questions are straightforward and simple, when the population 100% literate and speaks a common language(s), and when a sampling frame of addresses exists. It is less suitable for complex issues and long questionnaires, and it is inappropriate if spontaneous replies are required. The data obtained are generally less reliable than with face-to-interviews, as there was no interviewer to probe for further details. Participants can read all the questions before answering any one of them, and they can answer the questions any order they wish – and question order, which can be controlled in interview situations, can affect the type of response. Finally, there is no opportunity to supplement the questionnaires with observational data (brief descriptions by the researcher at the end of the interview can be valuable, e.g. interruptions and how the interview went). There is some evidence that self-administered questionnaires lead to an underestimate of patients' health problems in comparison with personal interview techniques (Bowling, 2002: 260).

A cross-sectional survey was done among Grade 10-12 learners in the Sub-district. This provided a 'snapshot' of the event, hence allowing data collection and analysis to be done within the given time frame. This is a descriptive survey of a defined, random cross-section of the population at one particular point in time. This is an economical method in relation to time and resource, as large numbers of people were surveyed relatively quickly and the standardized data were easily coded.

As with all descriptive studies, cross-sectional studies can only point to statistical associations between variables; they cannot alone establish causality.

The target population for the study was all high school learners in Tswaing Sub-district registered for 2009 academic year. At this adolescent stage of life, sexual activity is intense and

partners change frequently and hence, young people's opinions and behavior are interesting to study.

A two-stage sampling technique was used. This gave each school and each learner, an equal probability of being included in the sample. Firstly, the 7 schools were selected by random probability sampling. At the second stage, systematic sampling was employed to select learners that participated in the study. These sampling techniques are not frequently used in practice and it involves a high cost but only minimal advance knowledge of population is required, and moreover, it is simple to draw the sample [schools & learners], easy to check and easy to analyze data.

Participants had to be registered learners [16 years and above], willing to participate in the study voluntarily and capable and willing to provide informed consent.

5.2.2 Adolescents' knowledge of contraception

Although, many studies have been conducted all over the world to study the knowledge, attitude and practice of contraception in adolescents and young adults, no previous studies on secondary school learners' knowledge, perception and attitude regarding contraception and contraceptive practices in the North-west province could be traced. There was limited information on the knowledge of contraception and contraceptive practices among secondary school learners in South Africa. In the present study group, 43% of the high school learners had knowledge of contraception and 63.6% of male students and 68.8% of female students knew about the source of availability. However, a similar study conducted among 991 senior students (15-17 years) in North Gondar by Fantahun, Chala and Loha (1995) showed the level of knowledge of contraception to be 75%. Another study conducted in Nigeria by Araoye, Fakeye and Jolayemi (1998) in randomly selected 971 males and females aged 18-24 years in a Nigerian tertiary institution showed that 97.7% of males and 98.4% females respectively knew at least one method of contraception. Adinma and Okeke (1995, 1999) conducted 2 studies and reviewed contraception in 498 Nigerian Tertiary School Girls-228 from the Medical Discipline (MD) of

study and 270 from the Non-Medical Discipline (NMD) in 1995 and in 314 teenage Nigerian school girls comprising of 128 students at secondary and 186 at tertiary levels of institution in 1999. The overall mean awareness of contraception was 70.9% in the first group; however the mean level of contraceptive awareness for the various methods of contraception was 38.2% for the second survey group: 22.6% for the secondary school girls and 54.4% for the tertiary school girls. In India, two such studies have been carried out in Delhi and Ludhiana in the past.

Aggarwal, Sharma and Chhabra (2000) in Delhi conducted the survey in 500 undergraduate students of the medical colleges of Delhi and reported the knowledge regarding contraception to be 83.5%, which was comparable to the study conducted in Ludhiana by Benjamin, Panda, Singh and Bhatia (2001) among 527 senior secondary school children, where 87% were aware of contraception. Similar results were reported by Arowojolu, Ilesanmi, Roberts & Okunola (2002) from Nigeria, where a survey of 2388 Nigerian undergraduate students showed the contraceptive knowledge level to be 87.5%.

5.2.3 Availability and Sources of contraceptive services

In this study, 63(63.6%) male learners and 86(68.8%) female learners, though it easy to get hold of contraception. As majority of the participants agreed that it was easy to get hold of contraceptives, learners from School [B] 18/33(54.5%) and School [F] 21/33(63.6%) stated otherwise. They claimed that it was not easy for them to get hold of contraceptives. These areas are rural farm areas, serviced by a Mobile clinic unit; which come to them only once every two weeks. In a study by Sreytouch (2005), knowing where to receive family planning information and services was high among the respondents in Banteay Meanchey, Cambodia as 62% and 52% of respondents respectively knew at least one place to obtain contraceptive information and one place to access contraceptive services. Compared to a survey in 1995, knowledge relating to sources of information had increased by 29% and knowledge relating to family planning facilities had increased twofold. The local health centers, local clinic and mobile clinic were the main sources of contraceptive services and information. The study showed a similar result to

healthcare- client behavior presented in the Cambodia Demographic and Health Survey (CDHS) (2005) which found that, though private clinics were consistently the most popular source of private healthcare for both rural and urban users, the health center was the most popular source of health sought among public facilities by residents in Urban and rural areas (NIPH, NIS and ORC Macro 2006). The respondents' living standard was likely another reason why private clinics were less popular than public health centers in his study. In addition, it is probable that the proximity of health centre to the villages would make health centres more popular within the study areas.

5.2.4 Prevalence of contraception and sexual behaviour

In this study, it is observed that there is a definite discrepancy between learners understanding of contraception and sexual behavior. Although 43% of the studied group had any knowledge of contraception but 50.3% of male, 49.7% of females engaged in sexual activity. This rate of sexual activity is similar to the rates reported in other studies by Adinma & Okeke (1995); DHS (1999); Ebuehi, Ekanem & Ebuehi (2006). A further analysis showed that, only 36.4% of sexually active group used any form of contraception. This confirmed that awareness does not translate to the use of contraception. Although, it was not ascertained in this study, whether pregnancy was intended, this low rate of contraceptive usage would give rise to increased rate of unwanted pregnancy and sexually transmitted infection. If in the Demographic and Health survey (1999), only 11% of sexually active women aged 16 to 19 years ever used any modern contraceptive method; then 20 years on, 15% are contraceptive complaint, it shows the need to intensify the awareness campaign for contraceptive usage among the adolescents.

5.2.5 Age and sexuality

The average age of the male population was 17.1 years and that of the female was 17.3 years, as is usual in similar research. At this age sexual activity is intense and partners change frequently, and hence it is interesting to study young people's opinions and behavior (Langille & Denlaney, 2000).

Many of the adolescents in this study were sexually active, with an average age of first intercourse in the mid-teens. Other studies have also found the age of first intercourse to be in the mid-teens (Buga, Amoku & Ncayiyana, 1996; MacHale & Newell, 1997; Kapiga, Hunter & Nachtigal, 1992). There was a high rate of unprotected sexual activity among these respondents, with 34.1% of the male and 42.1% of the female students indicating having had sex without contraception. One of the outcomes is the fact that, 36.5% of the males and 44.7% of the females were not bothered concerning contraception. In Sao Paulo Brazil, Martin, *et al.*, (2006) found that 72% and 66% of private and public school students respectively were not yet sexually active. The average age at first intercourse was 17.5 for both groups. This is comparable to research carried out by Osis, *et al.*, (1999 cited in Martin, *et al.*, 2006, p.5); where the average age at first sexual intercourse was 16.7 years among males and 19.5 years among females. On the hand, more recent studies showed adolescents to be on average 2 years younger at their first intercourse (Almeida, *et al.*, 2003 cited in Martin, *et al.*, 2006, p. 6). In this study, the average age at first sexual intercourse was 14.9 years for the male students and 15.4 year for the females. These conflicting findings could have resulted from underreporting bias by the respondents of the present study. Or else by the difference in the population studied since different communities have different characteristics affecting students' knowledge, attitude and sexual behavior.

It was also verified that private school students had their first intercourse at older ages than public school students. Since 80% of private school students are from high socioeconomic background, socioeconomic condition had likely an impact on their age for sexual initiation. Moreover, private school students' higher education could have been a determinant for their sexual behavior (Martins, *et al.*, 2006). Research recently carried out in the Greater Sao Paulo area by Leite, *et al.*, (2004 cited in Martins, *et al.*, 2006, p.6) also described that higher schooling could push back the age of sexual initiation and facilitate the use of contraceptive methods in the first sexual intercourse. Learners from Schools like School F [16/33 (48.5%)] and School H [21/33(63.6%)] did not give information. Lack of sexual activity and culture sensitivity were

their reasons for lack of providing information. School H is a private school consisting of 94% white learners that are from high socioeconomic background.

5.2.6 Contraceptive use among Adolescent

In this study according to their knowledge, the most common form of contraception used by females (ranges from 24% - 60% respondents in all schools) were injectables; followed by oral steroid pills, copper T (9% - 57%). The most common contraceptive used by males were condoms (used among 60% - 90%). These result findings are comparable with a similar study done at Jozini District of KwaZulu-Natal by Oni, *et al.*, (2005) and in Sao Paulo by Martins, *et al.*, (2004). The most preferred method of contraception in young adults and adolescents was the condom followed by the COCs (Oral steroid pills) as reported in the study conducted by Fantahun, Chala, Loha (1995) in North Gonder and Araoye, Fateye, Jolayemi (1998) in Nigeria. However, COCs were the most preferred method of emergency contraception (43.9%) in a study conducted in Ethiopia by Tamire & Enqueselassie (2007). Knowledge of sterilization was not explored as this is not an appropriate contraceptive method for adolescent population.

The greater interest verified on condom could be because it is a contraceptive method that protects against sexually transmitted infections and empower on fertility issues as well (Martins, *et al.*, 2006). Equally it is an inexpensive, simple and effective method without side effects (Wawer, *et al.*, 1999). The learners in this study were however, not asked whether they had knowledge of their partners' contraceptive use, and this limits the study.

The source of knowledge about contraception in most of the studies, like that of Fantahun, *et al.*, (1995) in North Gonder, by Adinma & Okeke (1995) in Nigeria and Aggarwal, *et al.*, (2000) in Delhi, were from their schools and friends respectively, whereas in this present study, [in all schools], the main source of information on contraception and contraceptive use were from their parents. A similar study done in Calabar, Nigeria by Bassey, *et al.*, (2005) found the contraceptive awareness was high and the main sources of contraceptives information were books / magazines (37%) and friends (26%). In a Zimbabwean study by Kusule, *et al.*, (1997),

friends, teachers and media accounted for the main sources of information on contraception among adolescents. In times past, parents were ranked low as a source of information on sexuality but in this study, the family-parents ranked high. The influence of family values on sexual behavior and contraceptive attitude of adolescents has been well documented (Odumegwu, Luqman & Amos, 2002; Biddlecom, *et al.*, 2006). The high percentage of white participants from school H that were sexually inactive could therefore be due to the influence of family value impact on the population studied.

5.2.7 Role of the family and physicians

The present study showed that physicians and family were rated as satisfactory sources of information and advice, whereas the media and the church were deemed to be mediocre to unsatisfactory. Source of information that they preferred were doctors except learners from School G [25/33(75.8%)] as they preferred their parents. From this study, the preferred source of contraceptive information for the males was doctors and the preferred source of contraceptive information for female was their parents. Freeman, *et al.*, (1980) found that the more sexual topics discussed with parents, the less likely were the adolescents to have coital experience. Furthermore, they stated that the female students who were more likely to have discussed contraception with parent, obtained more contraception information from their mothers, and discussed contraception more with male friends. Fox & Inazu (1979) reported that girls who had sexual experience had higher frequency of talk about sexual subjects with their mothers, and suggested that mother-daughter communication in part results perceiving the daughter's sexual activity. This is in keeping with the findings in Jozini District, KwaZulu-Natal by Oni, *et al.*, (2005). The adolescents therefore expect basic information on contraception from their doctors, but do not seem to be getting this information especially learners from area that School G is located; there is no doctor covering these regions.

Similarly, a study by Kunene (1995), found that most school girls (77%) wanted their parents to discuss sexual matter with them. In his review on effective sexuality education for youths,

Grazioli (1997) also concluded that most teenagers preferred to obtain sexual education from their parents.

Physicians should participate more actively in the protection of adolescents' sexual health through education and counseling. A study by Selak, *et al.*, (2004), only 10% of the students got the information from their physicians, although as much as 70% would like to get the advice from their physician. Shame was the main reason why students restrained themselves from talking to a physician about sexual matters, which may reflect an inadequate approach of physicians to their young patients and lack of institutionalized counseling that would allow adolescents to get the information about contraception and sexual health. The fact is that there is not a single place in Twsaing Sub-district where the young people can seek this kind of information.

A similar study conducted in California, USA also revealed that young participants got less information from their physicians than they wanted (Schuster, *et al.*, 1996). As many as 47% of the respondents in the study by Selak, *et al.*, (2004) and 54% of those in the Californian study expressed their fear that a physician would inform their parents if asked for sex-related information.

5.2.8 Attitude and practice of contraception

In this study, there was a high rate of unprotected sexual activity among the respondents and many more male 88(50.3%) than females 87(49.7%) indicated that they had engaged in sexual intercourse and that 34.1% of this boys and 42.1% of this girls indicating having had sex without contraception. The reasons given included; ignorance, unavailability and not thinking about contraception at the time of sexual activity. These reasons are comparable with similar studies. In a study done by Fantahun, *et al.*, (1998) among 991 senior high school students in North Gonder, Ethiopia, the most common reason for not using modern contraceptive methods among sexually active respondents was little or lack of knowledge of contraceptives followed by no access to contraceptives and harmful effects of contraceptives. In a study by Renjhen, *et al.*, (2010), the

most common reasons (23%) cited for not using contraceptives were that it was against their religious beliefs to use contraceptives and that their sexual life would not be happy respectively. However, 19% felt that use of contraceptives would result in weakness, and nearly 10% felt that it would result in obesity. Araoye, Fakeyo & Jolayemi (1998) surveyed 2388 Nigerian undergraduate students and reported that 87% had experienced sex but only 34% had used some method of contraception. In a study done by Fantahun, Chala & Loha (1998) about 30% of the students had experienced sex but only 17% had used contraception. The two studies done by Adinma & Okeke (1995, 1999) also had similar results, where the number of students who experienced sex was 57% and 26.8% and the use of contraceptive was 23.5% and 17% respectively. Lowes & Radius (1987) from USA reported that 68% of 283 unmarried school students (at average 19 years of age) had experienced sex and 44% had used contraception, which is the highest among all the studies documented so far (Lowe & Radius, 1987).

5.2.9 Attitude to teenage pregnancy

When asked whether they would prefer to have sex if their partners want to have sex without contraception, majority of all schools disagreed [their response ranges from 17yrs – 24yrs] with 51.5% - 93.9%. All participants also approved that their partner's use of contraception. This is in keeping with results from a similar study in Jozini District, KZN (Oni, *et al.*, 2005). Although among the male respondents, 40% did not approve of their girlfriend use of contraception.

Teenage pregnancies are associated with maternal, fetal and neonatal adverse outcomes; they drop of school becoming parents that are unlikely to have the economic and social means to cater for their children. This is in tandem with the findings of (Okonofua, 1995) where contraceptive usage was low.

5.2.10 Role of the primary health care workers

More than 90% learners wanted information on contraception from their primary health care workers. This is comparable with the other findings like in the study by Oni, *et al.*, (2005); Tayo, *et al.*, (2011).

Primary health care is essential health care, made universally accessible to individuals and families in the community, and as family physicians and primary health workers live in the same community as his or her patients/ or this learners, then family doctors and PHC worker should render equal, accessible, available and affordable service to this needy learners.

5.3 LIMITATIONS OF THE STUDY

The study was a quantitative research. A cross sectional survey was done involving 7 schools. This means that the results of the study can be generalized to a wider population than the research subjects. The dynamism of this group made them agents of information retrieval and dissemination, so that their views about most things were more realistic postulation. But only selected learners from grades 10, 11, 12 were used. These limitations may therefore restrict the complete generalization of the research findings as there are learners in grades 7-9, that were 16 years and above.

Another limitation of the study is the limited sample of the study. Due to scarcity of time and resources, the study had to be limited to its study population.

Furthermore, another limitation was not including a large share of adolescents who do not attend school and comprises an extremely vulnerable risk group. One should bear that in mind since most studies showed schooling to be strongly associated to greater knowledge and use of contraceptive method.

Although data were collected by using a self-administered questionnaire, the researcher and the 2 research assistants were available to answer learners' queries. It is still possible that some learners might have misinterpreted some questions. Not all learners answered all questions, further limiting the reliability of the research results as it cannot be assumed that those learners who answered specific questions had the same knowledge, attitudes and perception as those who failed to answer the same questions.

Due to the cultural sensitivity of the subject, an attempt was made to minimise under-or over-reporting by making the questionnaires anonymous and as simple as possible. In addition, there could have been information bias regarding sexual behaviour, given that one's sexual life is a private issue and exploring that may be embarrassing and make people wary about confidentiality of information provided. Some measures were taken to minimize this limitation: Confidential questionnaires, voluntary participation, verbal and written assurance of information, confidentiality, and questionnaires administration without either teachers or staff being in the classroom.

Although the questionnaires were in English, Afrikaans, Setswana, it is possible that the learners might have been too shy to ask for clarifications, especially as many questions were related to sexuality issues and their personal sexual behaviours, attitudes and perceptions. Mood bias may not have been avoided as people in low spirits may under-estimate their amount of support and social activity, hence biasing the study results.

The respondents were not asked whether they had knowledge of their partners' contraceptive use, and this limits the study.

Another limitation of this study was not taking into account the socioeconomic status and education of the parents, even though they could be significant factors influencing the students' level of knowledge. Further research should take these variables into account.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

This study showed that the knowledge and perception of and attitudes of these high learners' regarding contraception were high. The study highlights that knowledge and awareness do not always lead to a positive attitude towards the use of contraceptives. The high level of sexual activity, early sexual initiation and low contraceptive use put these adolescents at risk of pregnancy and sexually transmitted infection.

According to their knowledge, the most common form of contraception used by females were combined injectable contraceptives (CICs) and the most common contraceptive used by males were condoms. Majority of the participants agreed that it was easy to get hold of contraceptives. The main source of information on contraception and contraceptive use were their parents. This study indicates that adolescents want to receive information on sexuality and contraception from their doctors but did not seem to be getting these informations. More than 90% respondents wanted information on contraception from their primary health care workers. Emphasis should be put on the need to delay sexual activity, but the correct information on contraception should also be given to adolescent. Adolescents should be encouraged to ask about contraception and sexual health at clinics, and all health workers, including nurses and doctors, who are consulted must see every encounter as an opportunity for counseling in reproductive health.

6.2 RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made for facilitating the enhanced utilization of contraceptives by learners and for conducting future research in this field. Effective utilization of contraceptive has the potential to improve not only the lives of adolescents, but also the live of their families and of their future children.

- Programmes and workshops should be offered about communication between parents and their children about sexuality, safe sex and contraception.
- The Department of Education should incorporate sex education into the school syllabus.
- Education on sexuality should commence at the primary school level. Not surprisingly, younger adolescents have the least information.
- Government should devise ways to reach males on male terms, not as adjuncts of female contraception. Male adolescents appear reluctant to engage in what they perceive as female concerns, and only rhetorically accept responsibility for contraception when it is seen as a female function.
- Education programs that address RSH should not only involve adolescents, but also must be directed towards the parents and teachers, who often lack accurate information. Parents and teachers should also be taught various ways to approach the topic and stimulate fruitful discussions.
- Youth centres and/or school-based contraceptive services should be established to provide learner-friendly services and supplies. Further, these youth centres must also provide educational and psychological services for teen victims of sexual abuse and /or domestic violence.
- Attitudes of contraceptive providers should not prevent nor discourage adolescents from accessing these services among services and supplies.
- Mass media campaigns should be promoted to curb unplanned pregnancies and promote the use of contraceptive services among learners.

- Strategies should be devised to ensure that the available human and material resources are utilized to the maximum to avoid long waiting times at PHC centres.
- Parents and other adults in the society should equally be educated in the regards to enable them uphold their responsibilities towards their children's sexual development.
- Adolescents should be encouraged to ask about contraception and sexual health at clinic, and all health workers, including nurses and doctors, who are consulted must see every encounter as an opportunity for counseling reproductive health. PHC workers should then stress the importance of discussing issues related to physical intimacy and contraception.
- The government and contraceptive expert should deliver contraception counseling services, in which first-time contraceptive users can access accurate information about possible side effects, and current users can receive follow-up consultation where any concerns about side effects can be discussed and alternative options explored.

As this research was only conducted in one sub-district and involved only grade 10-12 learners who completed questionnaires, it is recommended that future research should:

- Be conducted in other parts of South Africa.
- Study the challenges faced by learners who become parents and complete their schooling, as well as by those who discontinue their schooling.
- Focus on learners who use contraceptives successfully.
- Identify learners who have used contraceptives successfully for a number of years to become peer motivators enhancing the contraceptive utilization of other learners in their areas.

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APPENDIX A:
RESEARCH PROTOCOL

TITLE:

KNOWLEDGE, ATTITUDES AND PRACTICES OF CONTRACEPTION AMONG HIGH SCHOOL STUDENTS IN TSWAING SUB-DISTRICT, NORTH-WEST PROVINCE.

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TO:

DEPARTMENT OF FAMILY MEDICINE AND PRIMARY HEALTH CARE
UNIVERSITY OF LIMPOPO [MEDUNSA CAMPUS]

A research proposal presented in partial fulfillment of the requirements of a certificate family medicine specialty of the University of Limpopo [MEDUNSA Campus].

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1. STUDY PROBLEM

Adolescents represent about one-fifth of the total population of South Africa¹. The onset of sexual activity ranges from 13 to 18 years. Despite this, the majority of adolescents do not have access to sexual and reproductive health information and services.

The high incidence of teenage pregnancy noticed among high school students who were attending antenatal care at the clinics in Tswaing Sub-district is the major motivation for this study.

Furthermore, I noticed that there was equally a high incidence of sexually transmitted infections including HIV / AIDS among these high school pregnant students diagnosed and managed during antenatal care visits.

Teenagers are in a developmental transition, pregnancy or HIV/ AIDS usually adds emotional stress. Pregnant girls and their partners tend to drop out of school or vocational training, thus increasing their economic problems, loss of self-esteem, and strain on interpersonal relationships.

The STI / HIV epidemic has brought to light the urgent need for all primary health care providers to help clients to carry out a risk assessment for exposure to STIs / HIV, and accordingly offer information on safer sex practices, as appropriate. It is equally recommended that contraceptive services should be provided during other primary health care consultations, as appropriate.

There is an uneven distribution of population and doctors in South Africa with a shortage of doctors in rural areas. The health needs of rural people are few and sexual and reproductive

knowledge and services are included. It is the responsibility of a family physician in a rural practice to provide this.

Equally, this research is undertaken to provide significant information regarding the sexuality of teenagers that can be used in prioritizing interventions to minimize teenage pregnancy and sexually transmitted infections.

2. LITERATURE REVIEW

A study on the awareness, attitude and practice of contraception among secondary school girls in Calabar, Nigeria revealed that contraceptive awareness was high. The main sources of contraceptives information were books / magazines (37%) and friends (26%). 333 (74%) girls had a negative attitude (misconceptions) towards contraceptives, while 117(26%) girls said contraceptives were essential / useful. Sixty-six girls (14.7) admitted they were currently sexually active and 42(9.3%) of them used contraceptives. The study recommended that provision of accurate contraceptive information to dispel these misconceptions and the establishment of adolescent reproductive health service which should be strictly confidential to encourage acceptability and optimum utilization²

In a similar study done on Zimbabwean teenagers' knowledge of AIDS and other sexually transmitted disease using 1689 secondary school girls and boys, showed that their knowledge was low. While 80% could name an STI in an open question, only 16% could recognize the important symptoms of the common and treatable infection such as syphilis. The awareness of AIDS was high but when it came to the mode of transmission of AIDS, a large majority was not aware of the risk of intercourse with an infected person. The data showed that there is a need to review strategies of disseminating information to teenagers regarding STI, including AIDS, reproductive biology, sexuality and contraception. The best strategy will be the introduction of a reproductive health education curriculum in all schools starting at an early age³.

In Transkei, 25% of births were to teenagers, 75% of whom were unmarried. Adolescent sexual behaviour, knowledge and attitudes to sexuality among school girls in order to establish associated risk factors were studied. Of the 1072 respondents, 74.6% were already sexually experienced, and 21.0% were not. The majority of the sexually experienced girls (SEGs) were living with both their parents. There were no religious differences between the 2 groups of girls. The age of SEGs, at first coitus correlated positively with the age of menarche, and the age at the date, suggesting that sexual maturation and onset of dating were possible risk factors for initiation of sexual activity. Contraceptive use was low, and a third of SEGs had been pregnant at least once. The knowledge of reproductive biology among both groups of girls was generally poor, although SEGs were significantly more knowledgeable than SIGs. The majority of girls in both groups did not approve of premarital sex, and adolescent pregnancy. They also did not approve of the idea of introducing sex education in schools, or the provision of contraceptives by schools. Nearly a third of the respondents in both groups did not wish to get married in future. In

conclusion, the study showed that there was a high level of unprotected sexual activity among school girls in Transkei. The risk factors for this included early sexual maturation, early onset of dating, and poor knowledge of reproductive biology and contraceptives. Needs for school-based family life education to be introduced before girls initiates sexual activity were recommended⁴.

Two hundred male and 200 female from five high schools in the Jozini district, KwaZulu-Natal completed confidential, self-administered questionnaires in IsiZulu. Almost two-thirds (61%) of the males and only 34.5% of the females indicated that they had girlfriends or boyfriends. Many more males (61.6%) than females (27.8%) indicated that they had engaged in sexual intercourse. The average age of first sexual intercourse was 15.4 years for the males and 16.4 years for the females. The most common contraceptive used among the males was a condom (81.4%) and among females it was the injection (65.4%). There was a high rate of unprotected sexual activity among the respondents, with 75.2% of the males and 61.5% of the females indicating that they had sex without contraception. Most respondents received contraceptive information from the media. The study concluded that the high level of sexual activity and low contraceptive use put these adolescents at risk of pregnancy and STD infections and that these adolescents wanted to receive information on sexuality and contraception from their doctors⁵.

A similar study on high school children around Johannesburg, Guateng suggested that a least 50% of the scholars were sexually active, but only about 20% reported sexual intercourse during the month preceding the survey. Knowledge of condoms was poor. The most important finding was that half of the children were still not sexually active. The study suggested that education programs should support the development of safe and responsible sexual lifestyle⁶.

3. PURPOSE OF THE STUDY.

The purpose of this study is to assess the knowledge, attitudes and practices of contraception among high school students in Tswaing sub-district.

4. OBJECTIVES

1. To determine the knowledge, attitudes, practices of contraception among high school students in Tswaing Sub-district.
2. To establish whether the demographic characteristics of students (i.e. gender, age) influences their knowledge and attitude of contraception.

5. RESEARCH QUESTION

What is the knowledge, attitudes, practices of contraception among high school students in Tswaing Sub-district of the North-West Province?

6. METHOD

6.1 STUDY DESIGN

This is a quantitative research. A cross-sectional survey will be done.

6.2 SETTING

Tswaing Sub-district of the North-West Province: 15 High schools.

According to the yearly statistics, averages of 2301 students are enrolled in the schools yearly. The highest number is 2772 so far. The average number of under-sixteen years of age is 510. The age group is chosen on the basis of ability to give consent for research. There are 15 high schools in the Sub-district.

6.3 STUDY POPULATION

All high school students in Tswaing Sub-district registered for the current academic year.

A list of the 15 secondary schools will be arranged in random order and every second name will be selected. A list will be compiled by contacting all the selected secondary schools and requesting them to supply me with a list of students, names, date of birth and their addresses. From these lists, students will be allocated numbered cards as they were registered at the school. The study sample's cards will be coloured blue, while other cards will be white for easy identification by the research team. The third student and every subsequent third student thereafter will be included in the sample. .

Replacement of participants who refuse to participate will be done by randomly selecting the third student and every subsequent third student thereafter with a white card and present on the day of data collection.

6.4 SAMPLE POPULATION

The sample population would be based on the hypothesis that at least 22% of the high school students know and use the common contraceptive methods.

The formula used to calculate the sample size is:

$n = Z^2pq / d^2$, where p is the prevalence, q is 1-p, d is sampling error, z is confidence interval. Using p = 18%, d= 5%, z = 95%, the sample size is 231.

35 students will be selected from each school.

6.5 SAMPLING METHOD

Systematic sampling will be employed. There is need to ensure equal representation of males and females. Hence they will be stratified first and again stratified according to gender.

6.6 DATA COLLECTION

A questionnaire will be developed. It will include questions on knowledge of contraception, sexuality and reproductive functions, and on the participant's source of contraceptive information. The respondents' attitudes towards using contraception will be determined. These questionnaires will be researcher-administered. Trained field workers will help in the administration and explanation of the questions on the questionnaire to the selected students to ensure clarity and accurate understanding, and finally help in the retrieval of the answered questionnaires. This trained Afrikaans and Setswana speaking field workers will administer the respective questionnaires to the selected students.

Ten males and 10 females from one school (excluded from the main study) will take part in a pilot study and the questionnaires will be amended. The questionnaire will be translated and printed in Setswana and Afrikaans. To ensure clarity and accuracy, two groups of translators will be used for each language and the translations compared before a final translation will be obtained. Questions will be simple and concise.

Teachers will help enlist respondents across the grades. After explaining the study, the respondents in each grade will enlist on a voluntary basis. On the day that the questionnaire will be administered, the respondents will be seated in a classroom and questionnaire explained to them by me (the researcher) and the field workers. The questionnaire will be researcher-administered, anonymous and placed in a box after completion.

EXCLUSION CRITERIA

Those students who are under sixteen years and those with improper registration for the academic year will be excluded from this study.

INCLUSION CRITERIA

Students who are 16 years and above and equally present on the day of data collection will be included in this study

6.7 DATA ANALYSIS

Data will be presented using tabulations, percentage and chi-square to test significance. Data capturing and analysis will be done using Epi info 6-software package and the services of a medical statistician will be used for the descriptive statistics.

6.8 DATA COLLECTION MATERIALS, APPARATUS AND INSTRUMENT.

6.81. Questionnaires

6.82. Student identification papers.

6.83. School registers.

6.84. Black pens

6.9 RELIABILITY, VALIDITY AND OBJECTIVITY.

The dynamism of this group makes them agents of information retrieval and dissemination, so that their views about most things will have a more realistic postulation. High school students without debilitating medical morbidity are sexually active and are a group at risk of teenage pregnancy and sexually transmitted infections.

Test-retest reliability method will be used to assess the reproducibility and consistency. The method of data collection and analysis will try to replicate the participant's view, retest emerging ones and analyze the findings without modification.

Conceptual congruity, clarity and accuracy will be maintained by translating the questionnaires from English to Setswana and Afrikaans. Two groups of translators will be used and the translations compared before a final translation.

The findings from this study may have a more extensive importance and may form the bases for a broader research with wider application. Hence the external validity of the findings will be high as you can generalize the results of this study to other populations in the province.

Various ways to control for extraneous variables will be used such as

(A). Gathering information about how many high school children attend at different schools around this area and that, sampling will continue until the required number of participants is reached.

(B). Ensuring that all participants within each group are treated the same way.

(C). Employing homogenous group of participants

(D). Administering the questionnaires to students on the day that they are not writing an examination.

Face validity will be maintained as the questions will be relevant, reasonable, unambiguous and clear.

6.10 BIAS

Selection bias may occur due to limitation of study site to only schools in Tswaing Sub-district and selection of only the available students at the time of giving the questionnaires, but the relative homogeneity and class dynamism of the province and the accessibility of this district as a major sub-district in the central district of the North-West province expects to reduce this.

Sampling bias will be reduced by use of systemic sampling technique to ensure that all members of the population of students have an equal chance of being selected in the study sample.

Design bias will be reduced to avoid faulty designs, methods and inappropriate techniques of analysis by using a statistician and the use of my supervisor.

Evaluation apprehension due to anxiety generated in people by virtue of being tested will be reduced by talking to them to relax while still stressing on the importance of the research.

Mood bias may not be avoided as people in low spirits may under-estimate their amount of support and social activity, thus biasing the study results.

Reactive effect or Hawthorne ('guinea pig') effect will be avoided as they will be denied knowledge of the research until the day of the fieldwork and moreover, the sites of research have not been over researched.

Recall bias, reporting bias and social desirability bias may not be avoided.

7. ETHICAL CONSIDERATIONS

Participation will be voluntary. The selected students will be handed an information sheet explaining all relevant information about the research in English, Afrikaans and Setswana. A signed consent [appendix B] will be obtained from assenting volunteer after thorough assessment of their understanding of the research process. There is no minor in this research.

Personal data will exclude names to preserve confidentiality of the volunteered information. Signed consent will be separated and secured.

Clearance will be sought from the North-West provincial research and ethics committee before starting the study. Permission will also be sought from the Department of Research, Family Medicine and Research Ethics and Publication committee, University of Limpopo. Relevant heads of department and clinical staffs will be consulted. Protocols will be adhered to, however logistic may demand some laxity in timing so far as the content and accuracy of the data is not affected.

8. IMPLEMENTATION TIME FRAME

Research question submission.....Nov 2006

Research Proposal development.....July 2007

Research Approval.....October to November 2007

Data collection and Analysis.....Nov 2007 to March 2008
Report writing.....April to May 2008
Result Submission.....October 2008.

9. RESEARCH BUDGET ESTIMATE

The exclusive funding for this study will be done by me. The research budget estimate is as follows:

Materials [including stationeries].....R1400

Computer work, recording and printing.....R2175

Projects and Transport.....R725

Logistics [including needs of the assisting staff]...R1450

Total.....R5750

10. REFERENCES

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4. Buga GA, Amoko DH, Nayiyana DJ. Adolescent sexual behaviour, knowledge and attitudes to sexuality among school girls in Transkei, South Africa. East Afr Med J 1996; 73(2): 95-100.
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6. Frames G, Ferrinho P, Evian C. Knowledge and attitudes relating to condoms on the part of African high school children around Johannesburg. Curationis 1991; 14(2): 6-8

Appendix A1 [Consent form]

UNIVERSITY OF LIMPOPO (MEDUNSA CAMPUS) CONSENT FORM.

Statement concerning participation in a clinical Trial / Research Project.

Name of Project / Study / Trial.

THE KNOWLEDGE, ATTITUDES, PRACTICES OF CONTRACEPTION AMONGST HIGH SCHOOL STUDENTS IN TSWAING SUB-DISTRICT.

I have read the information on or heard the aim and objective of the proposed study and was provided the opportunity to ask questions and given adequate time to rethink the issue. The aim and objectives of the study are sufficiently clear to me. I have not been pressurized in any way.

I understand that participation in this Clinical Trial / Study / Project is completely voluntary and that I may withdraw from it at any time and without supplying reasons. This will have no

influence on the regular treatment that holds for my condition neither will it influence the care that I receive from my regular doctor.

I know that this Trial / Study / Project have been approved by the Research, Ethic and Publications Committee of Faculty of Medicine, University of Limpopo (Medunsa Campus) / Dr George Mukhari Hospital. I am fully aware that the results of this Trial / Study / Project will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

I hereby give consent to participate in this Trial / Study / Project.

.....

Name of Patient / volunteer.

.....

Signature of patient or guardian

.....

Place

.....

Date

.....

Witness

Statement by the Researcher

I provided verbal and / or written information regarding this Trial / Study / Project.

I agree to answer any future questions concerning the Trial / Study / Project as best as I am able.

I will adhere to the approved protocol.

.....
Name of the researcher

.....
Signature

Date

Place

Family Medicine and PHC

P.O.BOX 222

MEDUNSA

0204.

UNIVERSITY OF LIMPOPO (MEDUNSA CAMPUS) CONSENT FORM

APPENDIX A2

STATISTICAL ANALYSIS

The chairperson,

Research, Ethics and Publications Committee,

Faculty of

Box.....

MEDUNSA

Dear Sir/Madam

STATISTICAL ANALYSIS

I have studied the research protocol of _____

Titled: _____

and I agree/do not agree to assist with the statistical analysis.

Yours sincerely,

Signature: Statistician

Name in block letters

Date

AppendixA3 [Request paper]

LETTER OF PERMISSION TO THE PROVINCIAL AUTHORITY

Provincial ethnics committee
North-West Province
Department of Health and Social Welfare
Date:

The Chairperson
Research and Ethics Committee

Dear Sir / Madam,

APPLICATION FOR PERMISSION TO CONDUCT RESEARCH

I hereby apply for permission to conduct research, as part of the requirements for my M MED (Family Medicine) Degree with the University of Limpopo in Tswaing Sub-district. The aim of this study is to determine the knowledge, attitude and contraception amongst high school

students in Twsaing Sub-district. The research working plan and other details about the study are contained in the research protocol herewith included. This protocol received permission from the Research, Ethics and Publications Committee of Medunsa.

For further information please contact me at 073 440 4403

Yours truly,

Onyensoh, O.O.C

Appendix A4

LETTER OF PERMISSION TO THE PRINCIPAL

The Principal

Date:

Dear Sir/Madam,

PERMISSION TO CONDUCT RESEARCH

I hereby apply for permission to conduct research, as part of the requirement for my M.MED (Family Medicine) Degree with the University of Limpopo in your institution. The aim of this study is to determine the knowledge, attitudes and practices of contraception among high school students in Twsaing Sub-district. The research work plan and other details about the study are contained in the research protocol herewith included. This protocol received permission from the research, Ethics and Publications Committee of Medunsa.

For further information please contact me at 073 440 4403

Yours truly,

Appendix A5

ID NO:.....

DEPT OF FAMILY MEDICINE AND
PRIMARY HEALTH CARE
UNIVERSITY OF LIMPOPO.
MEDUNSA CAMPUS.

QUESTIONNAIRE FOR HIGH SCHOOL STUDENTS

Answer carefully. Tick X to the correct answer.

Demographic information

1. Sex:

Male

1
2

Female

2. Age in years:

16-17

17-18

18-19

19 -20

20-21

21 and above

1

3

5

6 5

2

3. Race:

Black

1

Coloured

2

3

White

3

Indian

4

4. Religion:

Christianity

1

Islamic

2

Traditional

3

4

Others 4

5. Who do you live with?

			5	<input type="text"/>
Mother	1	<input type="text"/>		
Father	2	<input type="text"/>		
Father	3	<input type="text"/>		
Both parents	4	<input type="text"/>	6	
		<input type="text"/>	others	5
Relative	5			

6. Age at Semenarche / menarche in years?

13	1	<input type="text"/>		
14	2		6	<input type="text"/>
15	3	<input type="text"/>		
16	4	<input type="text"/>		
17 r >	5			

7. Have you been pregnant in the past?

		<input type="text"/>		<input type="text"/>
Yes	1		7	
No	2	<input type="text"/>		

KNOWLEDGE ON CONTRACEPTION.

6. What is the most common contraceptive used by females in your area?

Female condom

1

Oral Steroid Pill

2

Injectable

3

8.

Copper T 380 IUD

4

Natural Methods

5

Abstinence

6

Withdrawal

7

Diaphragm 8

Tubal Ligation 9

9. What is the most common contraceptive used by males in your area?

Condom 1 9

Vasectomy 2

Spermicides 3

Withdrawal 4

Injectable 5

Periodic Abstinence 6

10. Do you think that it is easy to get hold of contraceptives?

YES 1 10.

NO 2

11. What is your source of information on contraception?

Parents 1 11.

Siblings 2

Teachers 3

Girlfriend / Boyfriend 4

T.V/ Radio/Magazine 5

12. What is your preferred source of information?

Parents 1 12.

Doctors 2

Others

3

13. Do you know that condoms can prevent sexually transmitted infections?

YES 1 13.

NO 2

14. Can a condom be used more than once?

Yes 1

No 2

14.

15. Can conception take place if a woman misses taking her contraceptive pill once?

YES 1

NO 2

15.

ATTITUDES

16. Would you prefer to have sex if your partners want to have sex without contraception?

YES 1

NO 2

16.

17. Would you approve of your partner's use of contraception?

Approved 1

Do not approve 2

17.

18. If you disapprove, what is your reason?

Fear of contraceptives	1	<input type="text"/>	
		<input type="text"/>	<input type="text"/>
Makes your partners promiscuous	2	<input type="text"/>	18.
Losing control over your partner	3	<input type="text"/>	
Having less enjoyable sex	4	<input type="text"/>	
Causes sterility	5	<input type="text"/>	

PRACTICES OF CONTRACEPTION.

19. Age in years at first sexual intercourse?

		<input type="text"/>	
Below 13	1	<input type="text"/>	
14	2	<input type="text"/>	<input type="text"/>
15	3	<input type="text"/>	19.
16	4	<input type="text"/>	
17 and above	5	<input type="text"/>	

20. Did you use contraceptives on your first sexual intercourse?

YES	1	<input type="text"/>	
		<input type="text"/>	20. <input type="text"/>

NO 2

21. Did your parent discuss contraceptive with you?

Yes 1

No 2

21.

22. If yes, are you satisfied with information you received from your parents?

Yes 1

No 2

22.

23. Do you have a girlfriend / boyfriend now?

Yes 1

No 2

23.

24. If yes and you have had sexual intercourse with him / her, what did you use?

Nothing 1

Condom 2

24.

25. Have you been having sexual intercourse with other people with contraception?

Always

1

Sometimes

2

25.

Never

26. If your answer to question 25 is never or sometimes, then your reason for lack of contraceptive use is....

Ignorance

1.

Unavailability

2.

Partners didn't want it

3

26.

Not thinking about contraception at the time of sexual activities. 4

27. Do you want information on contraception from your primary health care workers?

Yes

No

1
2

27.

Appendix A6

ID NO:.....

QUESTIONNAIRE IN AFRIKAANS

DEPARTEMENT VAN FAMILIE GENEESKUNDE + PRIMERE GESONDHEIDSORG

UNIVERSITEIT VAN LIMPOPO

MEDUNSA KAMPUS

Vraagstuk vir Hoërskool leerlinge

Antwoord versigtig. Maak 'n kruisie in die regte blokkie.

Demografiese inligting

1. Geslag

1

Manlik

2

Vroulik

1

2. Ouderdom

16-17

1

17-18

2

18-19

3

19 -20

4

20-21

5

21 en ouer

6

2

3. Ras

Swart

1

Wit

2

Kleurling

3

Indiër

4

3

4. Geloof

Christen

1

Islam

2

Tradisioneel

3

Ander

4

4

5. Saam met wie bly jy?

Moeder	1	<input type="text"/>	5	<input type="text"/>
Vader	2	<input type="text"/>		
Albei ouers	3	<input type="text"/>		
Familie lid	4	<input type="text"/>		
Ander	5	<input type="text"/>		

6. Ouderdom met eerste menstruasie/nat droom?

13	1	<input type="text"/>	6	<input type="text"/>
14	2	<input type="text"/>		
15	3	<input type="text"/>		
16	4	<input type="text"/>		
17 or >	5	<input type="text"/>		

7. Was jy al swanger?

Ja	1	<input type="text"/>	
Nee	2	<input type="text"/>	7 <input type="text"/>

KENNIS I.V.M. VOORBEHOEDMIDDELS

8. Wat is die mees algemene metode wat deur vroue in jou gebied gebruik word?

Vroulike kondoom	1	<input type="text"/>	
Mondelike pil		<input type="text"/>	
	2	<input type="text"/>	
Inspuitings	3	<input type="text"/>	
Intra uterine toestel	4		
		<input type="text"/>	
Natuurlike metodes	5		8. <input type="text"/>
Onthouding	6	<input type="text"/>	
		<input type="text"/>	
Onttrekking	7		
Diafram	8	<input type="text"/>	

Sterilisie

9

9. Wat is die mees algemene metode wat deur mans in jou gebied gebruik word?

Kondome

1

Vasektomie

Spermdoders 3

2

Onttrekking

4

9.

Inspuiting 5

Periodieke onthouding

6

10. Dink jy dit is maklik om voorbehoedmiddels te bekom?

Ja

1

Nee

2

10.

11. Wat is jou bron van inligting oor voorbehoedmiddels?

Ouers

1

Broers/susters

2

Onderwysers

3

Vriend/vriendin

4

11.

12. Wat is jou voorkeur bron van inligting?

Ouers 1

Dokters 2

Ander 3

12.

13. Weet jy dat kondome seksueel oordraagbare siektes kan voorkom?

Ja 1

Nee 2

13.

14. Kan 'n kondoom meer as een keer gebruik word?

Ja 1

Nee 2

14.

15. Sal 'n vrou swanger raak as sy een van haar pille vergeet?

Ja 1

Nee 2

15.

HOUDINGS.

16. Sal jy kies om seks te he indien jou maat dit sonder voorbehoeding wil doen?

Ja 1

Nee 2

16.

17. Sal jy dit goedkeur as jou maat voorbehoemiddels gebruik?

Goedkeur 1

Afkeur 2

17.

18. As jy dit nie goedkeur nie om watter rede?

Vrees vir voorbehoedmiddels

1

18.

Dat dit losbandigheid sal veroorsaak

2

Om beheer oor jou maat te verloor

3

Dat seks minder genotvol sal wees

4

Dat dit steriliteit veroorsaak

5

GEBRUIK VAN VOORBEHOEDMIDDELS

19. Ouderdom met eerste seksuele omgang

	1	<input type="text"/>	
Jonger as 13		<input type="text"/>	19. <input type="text"/>
14	2	<input type="text"/>	
		<input type="text"/>	
15	3	<input type="text"/>	
16	4	<input type="text"/>	
		<input type="text"/>	
17 en ouer	5	<input type="text"/>	

20. Het jy 'n voorbehoedmiddel gebruik met jou eerste omgang?

Ja

1

Nee

2

20.

21. Het jou ouers voorbehoedmiddels met jou bespreek?

Ja

1

Nee

2

21.

22. Indien ja, was jy tevrede met die inligting wat jy van jou ouers ontvang het?

Ja

1

Nee

2

22.

23. Het jy nou 'n vriend/vriendin?

Ja

1

Nee

2

23.

24. Indien ja, het jy seksuele omgang gehad en het jul 'n voorbehoedmiddel gebruik?

Niks

1

Kondoom

2

24.

25. Het jy omgang gehad met iemand anders behalwe jou vriend/vriendin en het jul toe voorbehoedmiddel gebruik?

Altyd

1

Soms

2

Nooit

3

25.

26. As jou antwoord op vraag 25 nooit of soms is, wat is die rede?.

Onkunde

1

nie beskikbaarheid

2

maat wat weier

3

26.

Geen gedagte aan voorbehoeding voor die omgang

4

27. Moet jou primêre gesondheidswerker inligting oor voorbehoedmiddels aan jou verskaf?

Ja

1

Nee

2

27.

Appendix A7:

QUESTIONNAIRE IN SETSWANA

ID NO.....

DEPT OF FAMILY MEDICINE AND
PRIMARY HEALTH CARE
UNIVERSITY OF LIMPOPO.
MEDUNSA CAMPUS.

DIPOTS TSA BAITHUTI BA SEKOLO SE SEGOLO

ARABA KA TLHOMAMO, KA X MO KARABONG EO E NEPAGETSENG.

1. BONG:

Monna

1

Mosadi

1

2

2 Dingwaga:

16-17

1

17-18

2

2.

18-19

3

19 -20

4

20-21

5

21 goya

6

3. Letso

Montsho

1

Mosweu

2

3

Morwa

3

Moindia

4

4. Tumelo

Mokeresete

1

Moisilamo

2

4

Setso

3

Tsedingwe

4

5. O dula le mang?

Mme

1

Rre

2

5

Botlhe

3

Wa-losika

4

Babangwe

5

6. O simolotse leng go bona kgwedi?

13

1

14

2

15 3

16 4

17 or >
5

6

7. A o setse o kile wa nna moimana?

Ee 1

7.

Nnyaa 2

KITSO YA DI-THIBELA PELEGI .

8. Ke thibela pelegi efeng e e tlwaelegileng e dirisiwa ke basadi mo lefelong la gago?

Mosomelwana wa basadi

Dipilisi 1
2

Lupu 3

Lemao 4

Mokwa wa setho	<input type="text"/>	8. <input type="text"/>
Go ikhatholosa	5 <input type="text"/> 6	
Go somola	<input type="text"/>	
Digram	7 <input type="text"/> 8	
Tubal Ligation	9 <input type="text"/>	

9. Ke thibela pelgi e feng e e tlwaelegileng e dirisiwa ke bo-rre mo lefelong la gaeno?

Mosomelwana	1 <input type="text"/>	9. <input type="text"/>
Vasekomi	2 <input type="text"/>	
Sepemisite	3 <input type="text"/>	
Go- somola	4 <input type="text"/> <input type="text"/>	
Lomao	5 <input type="text"/>	
Go- ikgathplosa	6 <input type="text"/>	

10. A o nagana gore go bonolo go fitlhelela di-thibela pelegi?

Ee	1	<input type="text"/>	10.	<input type="text"/>
Nnyaa	2	<input type="text"/>		

11. Ke mokgwa o feng yo o bonolo wa go fitlhelela kitso ya di-thibela pelegi?

Batsadi	1	<input type="text"/>		
Balosika	2	<input type="text"/>		
		<input type="text"/>		
Morutabana	3	<input type="text"/>	11.	<input type="text"/>
	4	<input type="text"/>		
Lekau/Lekgarebe		<input type="text"/>		
T/V Kgotsa Sealemoya		<input type="text"/>		
	5			

12. Ke mokgwa o feng yo o bonolo wa tshedimoseetso?

Batsadi 1

Di-Ngaka 2

Ba-bangwe 3

12.

13. A o itse gore mosomelwana o k thibela malwetsi a thobalano?

Ee 1

13.

Nnyaa 2

14. A mosomelwana o ka dirisiwa gofeta gangwe?

Ee 1

Nnyaa

2

14.

15. A kimo e ka nna teng fa mme a tlodisa di-thibela pelegi?

Ee

1

Nnyaa

2

15.

MAITSHOLO

16. A o ka tsema mo thobalanong fa mokapelo a sa dirisi di-thibela pelegi?

Ee

1

Nnyaa

2

16.

17. A o ka dumelela mokapelo wa gago a dirisa di-thibela pelegi?

Dumela

1

Ganetsa

2

17.

18. Fa o ganela lebaka?

1

Go tshaba di-thibela

Go rotloetsa molekane go sa tshepagale

2

18

Tlhoka maikarabelo mo molekaneng

3

Go sa eletseng thobalano

4

Go rotloetsa go sa tsholeng

5

TIRISO YA DI-THIBELA PELEGI.

19. Dingwaga tseo o tseneng mo thobalanong lantlha ka tsona?

Mo tlase ga 13

1

14

2

19

15

3

16

4

17 le kwa godimo

5

20. A o dirisitse di-thibela pelegi mo nakong ya gago ya pele ya thobalano ?

Ee

1

20.

Nnyaa

2

21. A molekane wag ago o buisane le weana ka di-thibela pelegi?

Ee

1

21

Nnyaa

2

22. Fa karabo ya gago ele ee, a o kgtsfaletse tthaloso eo?

Ee

1

Nnyaa

2

22

23. A o nale lekgarebe gona janong?

Ee

1

Nnyaa

2

23

24. Fa karabo ya gago ele ee, o newa dirisa eng fa o tsena mo thobalanong le ean?

Sepe

1

Mosomelwana

2

24

25. A o kile wa tsena mo thobalanong le batho ba ba dirisang Di-thibela pelegi?

Kametlha

1

Nakongwe

2

Le-eseng

3

25

26. Fa karabo ya gago mogo 25 ele le eseng kgotsa ka dinako dingwe, lebaka la

gago la go sa dirisi di-thibela pelegi ke

Go itlhokomolosa

1

Go tlhka di-thibela pelegi

2

26.

Molekane a sa di-batle

3

Go tlhoka go nagana ka di-thibela pelegi ka nako ya thobalno. 4

27. A o tlhoka kitso ka di-thibela pelegi mo ba diredi ba pholo?

Ee

1

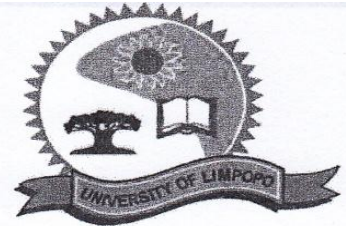
Nnyaa

2

27.

UNIVERSITY OF LIMPOPO

Medunsa Campus



MEDUNSA CAMPUS RESEARCH & ETHICS COMMITTEE

CLEARANCE CERTIFICATE

P O Medunsa
Medunsa
0204
SOUTH AFRICA

MEETING: 02/2008

PROJECT NUMBER: MCREC/M/27/2008: PG

Tel: 012 - 521 4000
Fax: 012 - 560 0086

PROJECT :

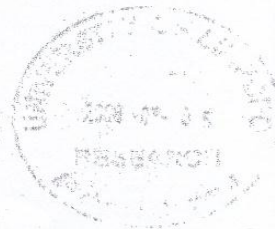
Title: Knowledge, attitudes and practices of contraception among High School students in Tswaing sub-district, North West Province
Researcher: Dr O Onyensoh
Supervisor: Dr J Tumbo
Other Involved H.O.D's: JC Muhloyo
Department: Family Medicine & Primary Health Care
School: Medicine
Degree: M Med (Family Medicine)

DATE CONSIDERED: March 05, 2008

DECISION OF THE COMMITTEE:

MCREC approved the project.

DATE: March 05, 2008




PROF GA OGUNBANJO
DIRECTOR: RESEARCH & CHAIRPERSON MCREC

Note:

- i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.
- ii) The budget for the research will be considered separately from the protocol. PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

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Appendix C [Request paper]

LETTER OF PERMISSION TO THE PROVINCIAL AUTHORITY

Provincial ethnics committee

North-West Province

Department of Health and Social Welfare

Date: 31-08-2009

The Chairperson

Research and Ethics Committee

Dear Sir / Madam,

APPLICATION FOR PERMISSION TO CONDUCT RESEARCH

I hereby apply for permission to conduct research, as part of the requirements for my M MED (Family Medicine) Degree with the University of Limpopo in Twsaing Sub-district. The aim of this study is to determine the knowledge, attitude and contraception amongst high school students in Twsaing Sub-district. The research working plan and other details about the study are contained in the research protocol herewith included. This protocol received permission from the Research, Ethics and Publications Committee of Medunsa.

For further information please contact me at 073 440 4403

Yours truly,

Onyensoh, O.O.C



2nd Floor Tirelo Building
Dr Albert Luthuli Drive
Mafikeng, 2745
Private Bag X2068

**Directorate: Policy,
Planning & Research**

Eng: R Mosiane
Tel: (018) 387 5780
Fax: (018) 387 5617
E-mail: mosianer@nwpg.gov.za

**TO : The Office of Superintendent- General
North West Department of Health**

**FROM : Mr K Rabanye
Director: Policy, Planning and Research**

DATE : 09 April 2009

**SUBJECT : Knowledge, attitudes and practices of contraception
among high school students in Tswaing sub-district:
North West Province**

The subject matter above refers.

1. Purpose

To call for a final approval for the research study to be undertaken in North West Province.

2. Background

The Principal Investigator of the above mentioned study has requested a permission to undertake this study in the province, Tswaing sub-district.

The protocol on Knowledge, attitudes and practice of contraception among high school students in Tswaing sub-district have been reviewed by members of the Provincial Health Research Committee. The ruling of the committee was that this study is a low risk study and therefore approval can be granted on condition few issues are addressed first. The researcher responded to the reviewers comments as attached. Ethics approval is granted by University of Limpopo.



3. Aim and Objective

To determine the knowledge, attitudes and practices of contraception among high school students in Tswaing sub-district.

4. Financial Implications

There are no financial implications to the North West Department of Health

4.1 Specific Action

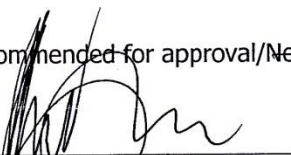
4.1.1 The Chief Director to further recommend for final approval by the Superintendent General

4.1.2 The Superintendent General to grant approval.



Mr K Rabanye
Director: Policy, Planning and Research

~~Recommended for approval/Not recommended~~



Mr V.W. Mbulawa: Chief Director: Corporate Service
Final approval

Recommended for approval/Not recommended

Notes :

~~Granted / Not granted~~


Dr L.K. Sebego
Superintendent - General
North West Department of Health

Appendix D

LETTER OF PERMISSION TO THE PRINCIPAL

TO: The Principal

Date:30-08-2009

Dear Sir/Madam,

PERMISSION TO CONDUCT RESEARCH

I hereby apply for permission to conduct research, as part of the requirement for my M.MED (Family Medicine) Degree with the University of Limpopo in your institution. The aim of this study is to determine the knowledge, attitudes and practices of contraception among high school students in Twsaing Sub-district. The research work plan and other details about the study are contained in the research protocol herewith included. This protocol received permission from the research, Ethics and Publications Committee of Medunsa.

For further information please contact me at 073 440 4403

Yours truly,

Onyensoh, O.O.C

A handwritten signature in black ink, appearing to read 'Onyensoh' with a stylized flourish above the name.

Appendix D: Coding list of High Schools.

ALPHABETS	NAMES OF SCHOOLS
A	REALEKA
B	BOSCHSPOORT
D	MAMORATWA
E	LODIRILE
F	PHATSIMA HIGH
G	TLHOAFALO SECONDARY
H	SANNIESHOF HIGH

