

# **Epidemiology of Sexually Transmitted infections in Selected Primary Health Care Centres in the Eastern Cape Province**

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Mini-thesis submitted in partial fulfillment of the requirements for the degree Master of Psychology in Research Psychology in the Department of Psychology, University of the Western Cape



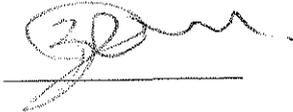
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## DECLARATION

The author hereby declares that this whole thesis, unless specifically indicated to the contrary in the text, is her own original work.

January 2003

A handwritten signature in black ink, appearing to be 'ZC', written over a horizontal line.

Zethu Cakata



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## **Abstract**

An epidemiological study was conducted with the main goal of describing the occurrences of the various STIs in the Eastern Cape province as well as biographical factors such as age, gender, and geographical location influencing them. Ten primary health care (PHC) centres located throughout the province served as sentinel sites for surveillance data collection for a period of 3 months using Daily and Monthly Report Forms. The surveillance data was analysed using relative frequencies to determine STIs prevalence. The main findings from the present study suggest that the most frequently encountered female syndromes were vaginal discharge and lower abdominal pains and most frequent male syndrome was Urethral discharge. Other syndromes accounted for less than 10% of the STI cases observed at the PHC centres during the study. The study also indicate that more STI patients were seen at urban PHC centres compared to rural ones and that most of the STI patients seen at PHC centres were women. These findings are helpful for the Health Department in the Eastern Cape Province to effectively plan for the control and prevention of all STIs including HIV/AIDS.

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# CHAPTER 1

## GENERAL INTRODUCTION

### 1.1 Introduction

The chapter introduces the mini-thesis. Firstly a brief background to the study is given. Then the aims, hypotheses and significance of the study are provided.

### 1.2 Background to the study

Although sexually transmitted infections (STIs) are a major social and health problem in South Africa, they have been neglected as an area of health research. In particular, there is a lack of accurate information about the transmission and spread of STIs on a national level. The need for such information has become even more crucial given the recent discovery that STIs may predispose an individual to infection with Human Immune Deficiency Virus (HIV) (Curtiss, 1996). There is therefore a need to have accurate prevalence data for planning purposes to improve the treatment and control of STIs in the country. The present study was originally developed as part of an umbrella project conducted by a team of University of the Western Cape (UWC) researchers led by Professors L. Simbayi and A. Strebel, which was contracted by the national Department of Health (DOH) to investigate health care-seeking behaviour for STIs. However due to both time and funding constraints it was decided to excise the study from the bigger project and conduct it independently in one province only.

### 1.3 Rationale for the Study

In South Africa the widespread prevalence of STI infections poses a challenge to both national and provincial governments. Although the overall population prevalence is

unknown at the moment, most sources of information indicate that it is substantial (see Department of Health, 1996). Published studies suggest a lack of information about transmission and epidemiology (for review, see Pham-Kanter, Steinberg & Ballard, 1996). The study is therefore an important contribution to the provision of better health care services as the profile assists in designing a plan for control and prevention of STIs.

Designing such a plan involves obtaining a profile of STI patients in terms of age, gender, educational level, and employment status of patients. The generalizability of a few of the studies conducted in South Africa has been questioned because their focus has been based in particular urban areas (see Pham-Kanter et al., 1996). There was therefore a need to conduct a large scale study involving various Primary Health Care (PHC) centres found in South Africa which was done in the present study. In particular, several PHC centres in Eastern Cape were used.

#### **1.4 Aims of the Study**

The main aim of this study was to obtain an epidemiological profile of STI patients at the selected PHC centres located in the Eastern Cape. Moreover, the study also wished to determine the influence of various demographic variables such as age, gender and geographical area on STI profiles obtained.

#### **1.5 Hypotheses**

Firstly, with regard to the first aim of the study it was hypothesised that the overall prevalence of STIs in Eastern Cape is moderately high. Secondly, with regard to the second aim it was hypothesised that

- a) The prevalence is higher in women than it is in men.

- b) Adolescents and young adults are at higher risk of contracting STIs than older people.
- c) The prevalence is higher in urban areas than in rural ones.

### **1.6 Significance of the Study**

As the main deliverer of services to the public within South Africa, the provincial government of the Eastern Cape needs to play a major role in fighting against the transmission and spread of STIs as that will also be in a way containing HIV/AIDS epidemic. The present study is therefore essential in that it will help provide the province's DOH with some useful information about the epidemiology of STIs. This is crucial for effective planning to fight and control the spread of this silent epidemic.

### **1.7 Layout of the rest of the mini Thesis**

Chapter 2 of this mini-thesis will cover the literature review section. The first part will give an overview of STIs, followed by treatment measures that are commonly used by most primary health care centres and then the actual review of relevant literature will be given. Lastly, the theoretical perspective on which this study is based will be provided.

The main focus of Chapter 3 will be on the Methodology used in this study. The chapter will provide important information such as how PHC centres were chosen, the type of research instruments used, the research design and data analysis.

Chapter 4 presents the results of the study, focusing on the effects of different variables like age, gender and geographical area.

Finally, Chapter 5 will present the discussion, limitations of the study, future research, implications of the findings and the conclusion.

## 1.8 Chapter Summary

This chapter has focused on the introduction, giving a brief background on why the study was conducted and how it can be helpful to provincial governments. It also gives us a clear picture of how the rest of the mini-thesis has been presented.



**CHAPTER 2**  
**DEFINITIONS, AETIOLOGY, EPIDEMIOLOGY and TREATMENT**  
**STRATEGIES**

**2.1 Introduction**

This chapter provides an overview of STIs, explaining the details about the different types of STIs and how they spread and their known symptoms. The second part of the chapter focuses on different models used when treating STIs.

**2.2 An overview of STIs**

STIs are those diseases that a person can contract by engaging in sexual behaviour with someone who has an active virus or bacteria. The current epidemic of STIs has resulted in large numbers of people becoming infected with syphilis, gonorrhoea, human papilloma virus (HPV) and cervical intraepithelial (CIN) (Pham-Kanter, Steinberg & Ballard, 1996). These infections lead to chronic recurrences, infertility and may predispose an individual to infection with HIV which causes Acquired Immune Deficiency Syndrome (AIDS).

Syphilis is most commonly acquired through anal, vaginal, or oral sex with someone who has an active infection. It progresses through three infectious stages, namely, primary, secondary and latent. In the primary stage symptoms include a painless ulcer (Curtiss, 1996). Although these sores can appear anywhere in the body, they usually occur in the genitals. In women they occur in the cervix and inner vaginal walls and therefore they are not visible (Cherniak & Feingold, 1997 in Curtiss, 1996). The sores usually appear from 10 days to 3 months and disappear in a few weeks even without treatment. The secondary stage is characterised by a systematic illness that usually occurs within 6 to 8 weeks and includes a generalized rash (Curtiss, 1996). During the third stage symptoms may reoccur within the first two years but then disappear and

remain hidden for 10 years or more. The third stage is characterised by progressive dementia as well as the involvement of the skin, bones, cardio-vascular and nervous system. Before the advent of penicillin, cerebral syphilis accounted for a large number of patients admitted to psychiatric hospitals (de Haans, 1994).

Gonorrhoea is another common type of an STI. It has been found that as many as 50-70% of both men and women do not experience early symptoms of gonorrhoea (Dernman, 1993). The implication of this fact is that many people are unknowingly passing the disease. Symptoms include discharge from the penis, vagina or rectum, and burning urination (Curtiss, 1996). Untreated gonorrhoea can lead to sterility, arthritis, heart disease and eye infection that causes blindness. In pregnant women it can lead to prematurely born and low birth weight babies (Cates & Alexander, 1988 in Curtiss, 1996). Infants can also acquire gonorrhoea from their mothers during delivery and if it is untreated they can become blind.

Genital HPV is another common type of STI. It is believed to cause what is known as genital warts. Genital warts that sometimes occur as a result of HPV infection are soft, pink or red and cauliflower like in appearance (Curtiss, 1996). According to Rosenfield (1991), HPV infection rates are high among the population of adolescents and young adult females and its treatment is often problematic due to side effects and treatment failures. The consequences of HPV infection include cervical cancer as well as the cancer of other parts of the genitalia (i.e., vulva, vagina and anus in women, and penis and anus in men) (Curtiss, 1996).

Other STIs include Chlamydia. Infections by chlamydia are known to be the biggest single cause of urethritis. The reported incidence is more than twice as common as gonorrhoea. Complications include inflammation of the internal genital organs and may have serious consequences especially for women including infertility.

Urethral discharge (in men) is the presence of an unusual secretion from the urethra. It is always abnormal.

### **2.3 Anorectal STIs**

There is an increasing incidence of STIs affecting anorectal region. This is attributed to anal intercourse, predominantly among homosexuals, but also some heterosexuals (Jones & Goorney, 1992). STIs affecting anorectal region include, gonococcus, anal syphilis, Chlamydia infection, Herpes simplex virus, HIV and anal papillomas.

Gonococcal infection according to Jones & Goorney (1992) is caused by *Neisseria gonorrhoea*. The organism is spread during anal intercourse and by auto-contamination from the vagina in women. An incubation period of 5 to 7 days is followed by proctitis and infection of the anal crypts. Patients with symptomatic disease have pruritus, mucopurulent discharge and bleeding. Disseminated infections may be associated with manifestations including joint pains. Many people with renal gonorrhoea do not have symptoms. About a quarter of homosexual men attending screening clinics have evidence of anorectal gonorrhoea.

Anal syphilis is another common type of anorectal STIs. It is characterised by anal chancre. Three quarters of those infected are homosexual men. The chancre appears two to six weeks after exposure during anal intercourse. It can be confused with anal fissure and when secondary bacterial infection supervenes can cause considerable pain at the anus (Jones & Goorney).

Most patients with primary anal syphilis have inguinal lymphadenopathy, which is rare in patients with anal fissures. Early lesions are teeming with spirochaetes, which are readily shown by dark field microscopy. Secondary syphilis appears 2 to 6 months after the primary lesion. Patients develop moist, smooth, warty masses around the anus and have a foul discharge and pruritus (Jones & Goorney). The warts are less

keratinised, smoother, flatter, and moister than anal papillomas. These lesions are highly infectious as spirochaetes are abundant in the discharge.

Patients with syphilis are treated with intramuscular penicillin. Those allergic to penicillin are treated with tetracycline or erythromycin. Follow up serological tests are repeated periodically for at least a year after treatment to confirm eradication of the infection.

Chlamydia trachomatis infection is an important cause of proctitis among those who practise anoreceptive intercourse. Symptoms include a mucoid or blood stained discharge, tenesmus, and fever. Infected patients are treated with tetracycline or erythromycin or a prolonged course of vibramycin.

Herpes simplex virus infection is another common type among homosexual men and is an important manifestation of HIV infection. Symptoms develop 1 to 3 weeks after anal intercourse and include bloody discharge, and constitutional symptoms such as malaise and fever. Patients are treated with oral or intravenous acyclovir on the severity of the illness. Treatment is continued until all the mucocutaneous surfaces have healed.

Anal papillomas are relatively common and are increasing in incidence. They are believed to be of viral origin, being caused by infection with human papilloma. There is an increased incidence among homosexual men who practise anoreceptive intercourse. However, anal papillomas also arise in the absence of anal sexual contact among heterosexual men and women. The papillomas appear as white, pink, or grey lesions around the anus and perineum and inside the anal canal. The symptoms vary accordingly and they include itching, discomfort, discharge, and bleeding. Many people with anal papillomas do not have any symptoms.

## **2.4 HIV and AIDS**

According to the Lovelife (2000) report, the total number of HIV infected people is expected to increase well into the next decade here in South Africa. The report states that the disposing factors to new infections still exist and HIV infection will continue to grow until society at large appreciates the extent of the epidemic and alters its behaviour. HIV has already infected more than 4 million South Africans (Collins and Stadler, 2000).

## **2.5 Treatment of STIs**

There are two main ways of treatment of STIs. The first one is an old method which relies on testing of specimen and treatment of singular infection. The second method which was adopted in 1996 for the management and control of STIs in South Africa is known as the Syndromic case management model (DoH, 1996; Grimwood, Karpakis & McNab, 1996; World Health Organisation, WHO, 1989, 1997). In this new approach, STIs are classified into one of 11 syndromes, namely urethral discharge/disuria, vaginal discharge, genital ulcer, pelvic inflammatory disease, inguinal swelling without ulcer, itching glands/foreskin, scrotal swelling, genital warts, HIV-related disease, other STI (which includes pubic lice, genital scabies, molluscum, contagiosum, and sexually acquired enteric infections), and not STI. Diagnostic codes are used when recording information for epidemiological analysis and for identification and appropriate treatment contracts. Thereafter, the treatment of each STI syndrome comprises a combination of drugs which are determined by the most prevalent aetiological agents and by drug susceptibility patterns in particular geographic area.

In addition to increasing the promotion of symptomatic patients receiving adequate treatment, the syndromic approach involves improving health worker attitudes and

skills around counselling, condom promotion, partner notification and patient adherence to treatment (WHO, 1989; Grimwood et al., 1996). The WHO has recommended the Syndromic case management approach for use in the impoverished third world countries based on the assumption that singular infections rarely occur with most patients usually having more than one STI, although showing any symptoms for some of them. Some STIs are expensive and difficult to confirm, it is therefore more cost effective to treat for more common STIs. In primary health care settings with limited access to laboratory services , and syndromic management of STIs is recommended for the delivery of effective STI management. Although we are still without HIV cure, the Anti Retro Viral drugs can manage the disease.

## **2.6 Chapter Summary**

This chapter has given an overview of STIs, their etiology, epidemiology and treatment strategies.



## CHAPTER 3

### LITERATURE REVIEW and THEORETICAL FRAMEWORK

#### 3.1 Introduction

The continuous spread of infectious diseases continues to threaten lives of people more especially in developing countries. In South Africa, for example, despite the political gains of 1994 marked by the first democratic elections, the country is still facing a lot of health problems. Many areas especially for disadvantaged communities still lack necessary resources to treat infectious diseases like STDs. Research that has been conducted in different parts of the world indicates that STDs are prominent in certain age groups, educational level, employment status and gender. Pertinent literature is reviewed below.

The first part of this chapter reviews previous studies conducted in this area, focusing mainly on the effects of different variables such as age, gender and geographical location. The final part presents the theoretical framework used in the study.

#### 3.2 Prevalence of STIs.

The prevalence of STIs vary according to different types. For example it was discovered that the reported figures from routine statistics in developed countries show that gonorrhoea is still rising in incidence (Henderson,1989).Henderson discovered that reported gonorrhoea had increased among women than men. The incidence of reported syphilis, on the other hand, is much lower than that of gonorrhoea and is common in men (mostly homosexual men) than women. It has also been found that genital warts and herpes has been rising steeply than any notifiable

STIs, the high reporting rate being perhaps due to its known association with cancer of the cervix and transmission to the new born. Genital warts also of viral have become extremely common (Henderson, 1989).

### 3.3 STIs and Age

Adolescents and young adults are a very sexually active group and that puts them at risk of contracting STIs including HIV/AIDS. Unlike before when sex before marriage was forbidden and young adults had to be married at a very early age, today's youth tend to postpone marriage and child bearing in order to complete their education. Consequently, they end up involving themselves in casual affairs that put them at risk of contracting STIs and HIV/AIDS. Many studies have indicated that the age group that is at high risk is between ages 20-24. For example in a study conducted in Malawi the prevalence of STIs in this age group was 37% (Warner, 1989). In America, it has been reported that 90% of reported STI patients were less than 30 years old (Curtiss, 1996)

The HIV prevalence has also been found to be high in the 20-24 age group. In a study conducted in a rural region of Uganda, HIV infection was found to be highest in men and women aged between 20 and 24 (Warner, 1989). Other studies have indicated that it is not only young adults that are at risk but also adolescents. For example, in a study conducted to address the problem of STIs among foster children in USA, it was concluded that each year approximately one in 14 of 13-19 year olds who have sex contract STIs (Curtiss, 1996).

Several reports from different parts of the world indicate that sexual maturation and initiation of sexual activity are currently occurring at a much younger age than they did in generations past (Bugu, Amoko, & Ncayiyana, 1996). This may not only have

demographic implications because of increased fertility, but may also affect adolescent reproductive health as a result of exposure to various STIs. This is especially relevant today because of the unfolding spectre of AIDS. Because of their risk-taking behaviours, adolescents are probably more likely to engage in unsafe sexual practices, and will therefore be more vulnerable to HIV infection and thus AIDS. In a study conducted among school adolescents in rural Transkei it was found that, nearly one-quarter of the sexually experienced girls, and about half of the boys, had a past history of STIs (Buga et al., 1996). The explanation for this high prevalence of STIs may be that early initiation of sexual activity and high levels of unprotected sexual activity are known to be closely associated with increased risks of STIs. This therefore implies that a large proportion of Transkeian adolescents are presently at high risk of HIV infection, since STIs do increase that risk, especially in the presence of genital ulcer, which was present in 6.5% of girls and 19.1% of boys with a history of STIs (Buga et al., 1996). A Cape Town based study exploring the risk factors for pregnancy among sexually active adolescents showed that sexual activity among the respondents started at a very early age and was initially unprotected. This has important implications for efforts to reduce the spread of STIs and HIV. The findings of this study indicate that teenagers who became pregnant were more likely to have had an STI. Although the proportion of respondents reporting a previous STI was low, it is nonetheless very worrying considering the youth and small numbers of reported sexual partners of the teenagers. The figures clearly indicate that STIs and HIV are important risks within the Cape Town teenager sexual network (Vundule, Maforah, Jewks & Jordaan, 2001).

It has been discovered that children are also affected by STI infection including HIV. In 1991 the WHO predicted that by the end of 1992, over a million of children

world wide will be infected with HIV, half of whom will have AIDS. This could make AIDS a major cause of death by the end of the century. The mean incubation period for children infected with HIV is 4-7 years, but for those under 5 years old this is reduced to 2-3 years. The opportunity for effective intervention is therefore small. On 31 December 1990, 32 countries reported a total of 2120 cases of AIDS in children under 13 years of age, half of whom were Romanian children with iatrogenically acquired disease (Mok,1991). The health care services of developing countries are overstretched and economies are poor. Owing to difficulties in early diagnosis and in ensuring regular long term clinical and laboratory follow-up from birth, and limited budgets, little information is available on the history of HIV infection in children. As more women become infected, HIV transmission from mother to child is on the increase and the implications for child health programmes are ominous (Zumla & Chintu, 1994).

Syphilis has also been found to be a major cause of perinatal mortality in South Africa. It has been calculated that Hlabisa district in KwaZulu-Natal, syphilis accounts for 27% of perinatal deaths. At Tygerberg Hospital syphilis accounted for 13% of deaths in 1993, up from 9% in 1986. It has been reported that approximately 10% of perinatal deaths in Pretoria, Port Elizabeth, and Witbank are caused by syphilis (Pattinson, 1998).

Collins and Stadler (2000) argue that young people especially young women appear to be amongst the most vulnerable sectors of the population. In 1998, the national antenatal sero-prevalence survey revealed that HIV prevalence among South African women less than 20 years was 21% (DoH,1998). This was close to double the 1997 figures of 12,7% and was by far the largest increase in any age. Young South Africans

are also vulnerable to other reproductive health problems that maybe associated with or predispose them to HIV infection (Collins and Stadler, 2000).

It is estimated that 4 million episodes of STIs occur each year in South Africa with a substantial proportion of these infections occurring among adolescents and young adults. Meanwhile, the onset of sexual activity has become progressively earlier, with many South Africans become sexually active at 13 or 14 years and adolescents' knowledge of reproductive function and sexuality is generally poor (DoH,1995).The Lovelife (2000) report states that HIV mostly affects younger people with around half of all adults who acquire HIV becoming infected before they turn 25. Over 50 % of these young people will die of AIDS before their 35<sup>th</sup> birthday.

### **3.4 STIs and Gender**

It has been argued that women's reproductive health reflect many aspects of nation's underdevelopment, not only in medicine but in culture, education, politics and economics (Groves, 1991). Half of the world's women are of child bearing age. As reported by Groves (1991) among those living in developing countries problems relating to reproduction account for more than half their mortality. Providing better medical care is not the main priority, political and social change should come first. One important problem is the low status of women in developing countries. Although women work up to 6 hours longer each day than men they are perceived as dependants not producers. Reproductive health in the developing world has cultural and political complexities that are often underestimated.

South African women have dealt with a lot of issues in the 1990s. The high prevalence rate of STIs among women is another battle to fight. Many studies conducted in the area of STIs show that the prevalence rate tends to be higher on women than it is on men. For example, in a study conducted in America the results

showed that women with gonorrhoea are seen more frequently than men. In another study conducted in Malawi, out of a sample of 6.605 women attending antenatal clinics from June to November 1994 were tested, the prevalence in under 20s was 24% and 37% in women aged 20-24 (Warner,1989). In African countries like Rwanda, one study indicates that the prevalence rate of syphilis and HIV among women was higher than in men (Leroy, 1995).The risk of STDs is also enhanced by certain traditional practices. Throughout sub-Saharan Africa for example, men with STIs believe that intercourse with virgins is the best cure.The practise among African women of inserting astrigent herbs into the vagina to increase friction during intercourse increases the risk of tears and thus of HIV infection (Groves, 1991).

There are a number of factors that continue to make women susceptible to this STI epidemic. These include the low status of women in society and in relationships , economic dependency and the threat of physical force in particular, all of which make it difficult for women to protect themselves from the infection. There are also biological reasons as well, for example females have an increased risk of acquiring STIs because their vaginal physiology (ie vaginal structure) makes them more susceptible to infection than males.

Empowerment is needed to help communities understand their rights to health. Having no say in sexual matters puts the majority of women at risk of contacting STIs including HIV. The present study helps us describe the position of women concerning STIs in the Eastern Cape and thus help in designing measures to combat the problem.

### **3.5 STIs and Geographical Area**

Movement of people from rural to urban areas and vice versa has contributed to the transmission and spread of STIs. In the olden days, STI infections were rare in rural areas because people stuck to strict traditional rules which forbid sex before marriage

or extra marital affairs. Lots of changes have now taken place. People now go to big cities and when they go back to rural areas they bring all the influence. Studies on STI have shown that the prevalence continue to rise in rural areas. On the other hand HIV infection in Malawi appeared to have peaked in urban clinics (Leroy, 1995). Researchers have concluded despite preventative programs and substantial knowledge of STIs and AIDS, the incidence of infection remains high (Leroy, 1995). Therefore, prevention strategies among vulnerable communities are urgently needed to contain HIV epidemic.

Despite reports of high rates of HIV infection from clinical and urban settings in Africa data on rural populations are still scarce. Limited information suggests that HIV infection is spreading rapidly outside urban centres in some East and Central African countries. As about 70% of the sub-Saharan African population does not live in cities it is critical to understand the dynamics of the HIV epidemic in rural areas. Trading villages along main roads represent one obvious reservoir of infection outside the main urban areas. Their importance as focuses of infection is related in part to commercial sex between local women and long distance truck drivers has been reported in Uganda. The main road trading centres seem to act as focuses of infection. This is partly associated with domestic and international trucking and commercial sex in bars and hotels, which is reflected in the disproportionately high seroprevalence among women compared with men (Wawer,et al, 1991).

### **3.6 STIs and the South African context**

South Africa currently faces an epidemic similar in scope and demographic characteristics to that of other African countries. There is little doubt that South

Africa's HIV epidemic is in part the legacy of neglected STI control. AIDS programmes have continued to neglect other STIs.

In Africa, migration and rapid urbanisation are demographic factors that have played a major role in facilitating the spread of STIs. Economic forces have resulted in a selective male migration to the urban areas, resulting in an excess of men in the large cities. The result is a change in patterns of sexual behaviour, with casual and commercial sex becoming major mode of sexual expression (Delany, 1998).

The South African Health Review (DoH, 1999) states that the control of STIs is a public health priority here in South Africa. The association between STIs and the increased transmission of HIV has now placed STI control relatively high on the global public health agenda.

One of the major obstacles to reducing the burden of STIs in South Africa is the inadequate quality of STI care in the private sector (Dartnall, Schneider, Hlatshwayo & Clews, 1997). The stigma and embarrassment of STIs act to push people with STIs towards the privacy and anonymity of the general practitioner consulting rooms. Other reasons include easier access, longer hours of service, shorter waiting times, being seen by a doctor (as opposed to a nurse). It has been estimated that private general practitioners in SA treat approximately five million cases of STIs each year. In the rural Hlabisa district (KZN), where public facilities have received extensive support and development, nearly half of all STI cases in the district are seen by private GPs (Wilkinson, Connolly & Harrison, 1998). A study of the utilisation patterns in Alexandra, a poor urban township in Gauteng found that 63% of all visits for STIs occurred in the private sector (Rispel, Beattie & Xaba, 1998).

There is a high prevalence of STIs among women of reproductive age. Half of the infected women are asymptomatic and their STI is undetected and untreated. While

the remaining infected women are symptomatic, most remain untreated because they do not seek care. Of those that do seek care only 65% receive adequate drug treatment mostly in PHC centres. Three main factors, according to Lurie, & Harrison (1998) contribute to the transmission dynamics that maintain this large reservoir of prevalent and untreated infections. The first one is the poor case management. Those women given inadequate drug treatment remain infectious and continue to spread disease. Furthermore as clinical surveillance indicates that only about 4% of patients treated for an STI are asymptomatic contacts, partner treatment strategies are clearly inadequate and this also perpetuates transmission. Secondly, if most cases never present for treatment, transmission will continue unchecked. Few symptomatic women appear to realise that they are infected and hence do not seek care. Even for women who do recognise an infection, barriers to seeking care are often significant and include cost, distance, and fear of stigmatization, if they do present at the PHC centre. The third reason for the continued high prevalence of STIs is the considerable circular migration by men between an urban workplace and a rural home. That is typical of many SA settings.

### **3.6 STIs and Sexual Behaviour**

For various reasons, people continue to engage in behaviours that put them at risk of contracting STIs. In the study conducted by Moses et al. (1994) undertaken to examine the interaction between sexual behaviour and transmission of STIs in Kenya, it was discovered that among women attending PHC centres with STI-related complaints 24% reported two or more sex partners in the past three months and of these 77% reported having exchanged sex for money. Furthermore, whereas 76% of the married women had one sex partner only, in contrast, unmarried women reported

more partners than married women. For men, not women, marital status was a predictor of being an STI patient, with married men living apart from their wives being more likely to be STI patients. Clearly, married women are more likely to be monogamous than unmarried women but the same is not true for men.

It has been discovered that heterosexual spread of HIV accounts for more than 9 in ten new infections worldwide. Although modifying sexual behaviour is the most effective approach to prevention, it may also be the most difficult. In many Third World cities, especially in Africa, young women outnumber young men, creating a demand for services of prostitutes. Single urban women may have few other opportunities for employment. With up to 1000 clients a year these prostitutes are at high risk of exposure to HIV and serve as reservoirs of infection for their partners (Biggar, 1991).

Researchers like Chipfakacha (1992) believe that promiscuity plays a role in the spread of STDs. He argues that young people today have acquired freedom of having sex and they are not only active but also have a care free attitude with the health of their sexual partners. He states that during the last few years there has been a drastic change of lifestyle especially among youth, who have incorporated sexual freedom. This has increased the risk of STI infection including HIV/AIDS.

### **3.8 Theoretical Perspective**

There are two main perspectives to the current spread of STIs. One of them conservative and sees STIs as based on individual choice. STIs, according to conservatives, are a part of a larger breakdown of self-discipline to internalised moral codes resulting in a range of social ills. The second perspective is called the progressive perspective. This perspective sees STIs as diseases of social deprivation, poverty, lack of education and lack of facilities for recreation or treatment. The

present study supports the second perspective since it is inline with the biopsychosocial model. The model is discussed below.

The reasons for the current spread of STIs could be an interconnection of behavioural, social and biological factors. The growing recognition that psychosocial factors influence physical health has led to the emergency of the approach known as the biopsychosocial model of illness (Schlebusch, 1990). This model does not suggest that biological factors are unimportant, it simply asserts that these factors operate in a psychosocial context that is also influential. For example, there is far greater sexual freedom today, particularly in urban industrial societies. This has led to an increase in sexual activity, both homosexual and heterosexual, premarital and extramarital sex are condoned and the use of multiple anonymous sexual partners is common. Jones (1985) emphasises that the management of STIs is not only about diagnosis and treatment but it is a social problem and requires bio-social solutions.

There are social factors that seem to promote this greater sexual freedom. De Haans (1994) believes that this sexual freedom has come about as a result of changes in the norms and values of modern societies and the weakening of social controls. The migration of young people from rural to cities loosens family ties and lessens the power of the group to control the behaviour of its members. The lack of health education and social support also contribute to the continuous spread of STIs.

People have little knowledge about the importance of early diagnosis of STIs as a result they tend to wait around before seeking treatment when they discover that they are infected. In other communities there is very little support system for people who have STI infections. The society often regard a person with STIs as someone who has broken the sexual code, someone who has a deviant lifestyle or promiscuous. This situation demotivates people from reporting STIs in that way they continue spreading

the disease. Another contributing factor to the spread of STIs is the quality of medical care. In particular the medical care of disadvantaged communities are often under equipped with limited resources to detect and treat STIs. One other factor that has made and continue to make South Africa susceptible to this epidemic is the low status of women in society and within relationships. Economic dependency and the threat of physical force in particular make it difficult for women to protect themselves from STI infections. Social norms that accept or encourage high numbers of sex partners especially among men also contribute to the spread of STIs.

Biopsychosocial is often referred to as the holistic approach because it takes into account a variety of factors that play a role in people's health status. This approach is inline with the syndromic case management approach for STI treatment. The syndromic case Management Approach requires that individuals be treated holistically as a lot of factors come into play in the transmission of STIs. Together with the popular biological component of diagnosis and treatment, the health care providers are required to bring in the psychosocial componet in the form of counseling and education.

The challenge that the government is faced with when it comes to the implementation of this approach is ensuring that health care providers are given necessary skills. Some health care workers are not equipped with necessary skills like counseling so they might need skills development workshops. This is a very important concept as history has shown that medication alone does not help us deal with the challenge posed by STIs.

### 3.9 Chapter Summary

This chapter has reviewed relevant literature focusing on the influence of variables such as age, gender, geographical location and sexual behaviour on STI prevalence. The rest of the chapter looked at the theoretical explanations of the current spread of STIs.



## CHAPTER 4

### METHODOLOGY

#### 4.1 Introduction

This chapter focuses on the methodology used in this study. It presents the methodological framework, sample, research instruments, the research design, the procedure, data analysis and the ethical considerations.

#### 4.2 Methodological Framework

This research employs a quantitative research paradigm. Quantitative research is characterised by the assumption that human behaviour can be explained by what may be termed social facts, which can be investigated by methodologies that utilise the deductive logic of the natural sciences (Horn, 1994). Quantitative investigations look for distinguishing characteristics, elemental properties and empirical boundaries and tend to measure “how much”, or “how often”. A quantitative research allows flexibility in the treatment of data, in terms of comparative analyses, statistical analyses and repeatability of data collection in order to verify reliability. The strengths of quantitative methodologies may be summarised as follows

- Quantitative methodologies are appropriate to measure overt behaviour
- They are strong in measuring descriptive aspects
- They allow comparison and replication
- Reliability and validity may be determined more objectively than qualitative techniques.

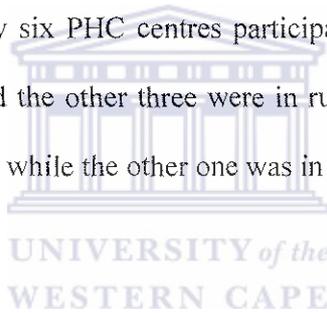
These strengths however, are not the sole prerogative of quantitative designs. Indeed, many of the arguments for the use of quantitative research, especially in an academic climate where resources are limited, have pragmatic origins in terms of allowing large

scale data collection and analysis at reasonable cost and effort, as well as providing statistical proof (Horna,1994). The weakness of quantitative research designs lie mainly in their failure to ascertain deeper underlying meanings and explanations beyond the descriptive level (Jones, 1997).

The present study is a descriptive quantitative study. It is concerned with organizing and summarizing data (Pretorious, 1997). It summarises and condenses the data through tables, graphs and sometimes through mathematical summaries.

#### **4.3 Description of the PHC centres**

Ten PHC centres were originally selected for this study through convenience sampling. Two of them refused to participate and the other two lost all the data they had collected. As a result only six PHC centres participated in this study. Three of those were in Urban areas, and the other three were in rural ones. Of those in urban areas, two were in major towns while the other one was in a township.



#### **4.4 Participants**

All patients treated at the 6 PHC centres in the Eastern Cape Province served as participants. Patients consisted of people of all ages who have contracted STIs and presented themselves for treatment at the PHC centres. Both sexes and all races were represented in different proportions.

#### **4.5 Research design**

This type of a study is referred to as a descriptive epidemiological study (Katzenellenboge, Joubert, & Abdool Karim, 1997). It describes the occurrences of disease and other health-related characteristics in human populations in terms of

person the who: age, sex and social class), place (the *where*: geographical location) and time. The epidemiology of a particular disease describes the distribution and determinants of that disease. For example, it has been proven that in certain areas the epidemiology of STI infection demonstrates that young adults aged 16-30 years have the highest rate of infection, women have a three fold -higher of infection and that incident of STI infection is beginning to rise in rural areas. Epidemiology provides the scientific basis upon which public health policy decisions are made.

#### **4.6 Research instruments**

Daily and Monthly Report Forms designed by the National Reference Centre for STIs at the South African Institute for Medical Research for National Surveillance were used to collect data (see Appendices A & B). On the daily report form each STI patient is categorised in terms of age, gender, clinical syndrome, new episode and follow up cases. The monthly report form combines all the information on the daily report form for each calendar month. STD prevalence was measured through 11 different codes that are used in the syndromic management.

#### **4.7 Procedure**

Formal application for permission to conduct the research was sought from the Eastern Cape government's DoH and Heads of each PHC facility chosen as research sites. One health provider at each PHC centre was responsible for collecting and collating STIs surveillance data using both the Daily and Monthly Report Forms for a 3-month period. Data collection took place between October and December 2000. The data collection arrangement was done specially for the project. Ideally all PHC centres a required by the department of health to collect this type of information but some

clinics do not do that. For that reason an arrangement had to be made with nursing sisters incharge in each PHC centre to oversee the data collection process. Every consultation room in each health centre had Daily report Form wherein they enter the required information of STI clients. At the end of the month the information from daily forms will be transferred to monthly forms. The sister incharge's main responsibility was to do quality assurance. Both Daily and Monthly Forms were submitted to the research for further verification to ensure that at the quality data is collected at the end.

#### **4.8 Data Analysis**

Descriptive statistics in the form of frequencies and/or percentages was used to summarise the profiles of STIs in all research sites. Frequency tables and graphical illustrations are used as means of presenting the findings and explanation is given to give meaning to the graphical images. Statistical Programme for Social Science (SPSS) was used to conduct Chi-square tests and Microsoft Excel Software was used to draw graphs.

#### **4.9 Ethical Considerations**

Ethical approval was sought and obtained by my supervisor Professor Simbayi from UWC's Senate Research Committee (see attachments). As also alluded to earlier formal application to conduct this project has been sought from the Eastern Cape's provincial DOH, and heads of each PHC facility involved in the study. As it is customary in research of this kind confidentiality was ensured in the case of patients' records by the fact that only professional nurses who helped with data collection and collating were the only ones with direct access to patient information. Furthermore,

the names of the PHC centres chosen as research sites will also remain confidential in this mini thesis. Finally both oral and written (i.e., in the form of a mini thesis and executive summary thereof) feedback will be made available to managers of the research site once the mini thesis is completed.

#### **4.10 Chapter Summary**

This chapter has dealt with methodological issues which help the reader to understand the research method used in the study. It also provides useful information in terms of the systematic procedure that has been followed when collecting and analysing this data.



## CHAPTER 5

### RESULTS

#### 5.1 Introduction

This chapter presents the results of the present study. STI prevalences are presented in terms of different types and then according to age group, gender and geographical location.

#### 5.2 Different types of STIs

The distribution of various types of STIs in the PHC centres during the three months when data was collected indicate that female syndromes has a higher prevalence than male syndromes. Syndromes are distributed according to the syndromic case management approach. This approach categorises STI into 11 different codes. The different codes used were as follows:

Code 1- Urethral discharge

Code 2 – Vaginal Discharge

Code 3- Genital ulceration

Code 4- Lower abdominal pain

Code 5- Inguinal Swelling

Code 6- Itching glans/foreskin balanitis/ balanoposthitis

Code 7- Scrotal swelling/ pain

Code 8- Genital warts

Code 9- HIV related disease

Code 10- Other STI ( pubic lice, genital scabies, molluscum, contagiosum and sexually acquired enteric infections)

Code 11- Not STI



### ***5.2.1 Genital Discharge***

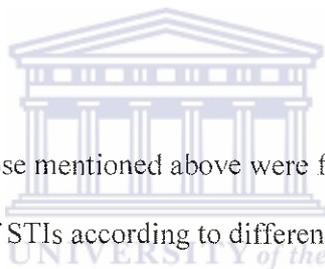
The data shows that both vaginal discharge and urethral discharge had the highest prevalence when compared to other codes. Genital discharge seem to be the most common symptom of quite a number of STIs like gonorrhoea, syphilis . People infected with such STIs are likely to present with genital discharge. The discomfort it causes may compel the infected party to seek help because most of the time it is itchy, smelly and may cause an irritating rash.

### ***5.2.2 Lower Abdominal Pain***

Lower abdominal Pain which is a female syndrome had a reasonably high prevalence of 15.5%.

### ***5.2.3 Other syndromes***

Other syndromes other than those mentioned above were found not to be so widespread. The distribution of STIs according to different codes is illustrated in figure one below. Most frequently encountered female syndromes were vaginal discharge (Code 2 )and lower abdominal pains (Code 4).Most frequent male STD syndrome was urethral discharge (Code 1).Other syndromes accounted for less than 10%



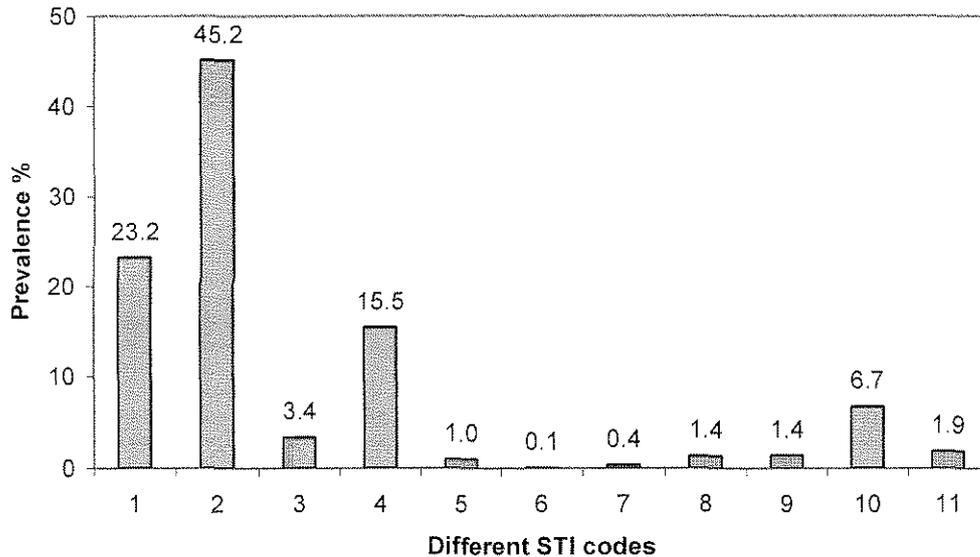


Figure 1: STI prevalence according to different codes

### 5.3 STI prevalence and Age and Sex



#### 5.3.1 Adults

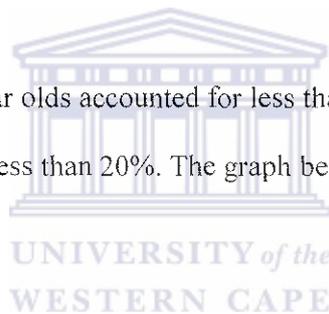
The age group of 20-29 and 30-39 years had a significantly higher prevalence when compared to other groups. These age groups consist of people of marriage age and /or the people who have society's approval to engage in sex. The major shortcoming for these people is that they are often excluded in educational programmes as the emphasis is put on the younger age group. The sexual behaviour in these groups is often risky as people continue to have multiple sexual partners and extramarital affairs. Knowledge on condom use is often limited as some are illiterate (more especially in the research sites of the present study) and others consider such information as targeting teenagers. The latter seem to indicate lack of risk personalization which contribute to the spread of STIs. People in general do not

consider themselves as being at risk of contracting STIs hence they engage in risky behaviours. Older people associate STIs with adolescents and vice versa.

### *5.3.3 Adolescents*

The adolescent group (15-19) which is always regarded as the highly sexual active group had the prevalence of 15.1% (girls) and 16.3 % ( boys). The prevalence is lower than the 20-39 age group but still worrying because of the risk of unplanned pregnancy and HIV/AIDS. Both unplanned pregnancy and HIV are fatal consequences of unprotected sex as they impact negatively to one's entire future. Acquiring HIV before age 20 could mean one might not live long enough to celebrate their 35<sup>th</sup> birthday and that has negative implications to the future of the country.

The prevalence on the 0-14 year olds accounted for less than 5% and adults 40 years and older had a prevalence of less than 20%. The graph below illustrates the distribution of STIs and Age.



## Overall prevalence by age and sex

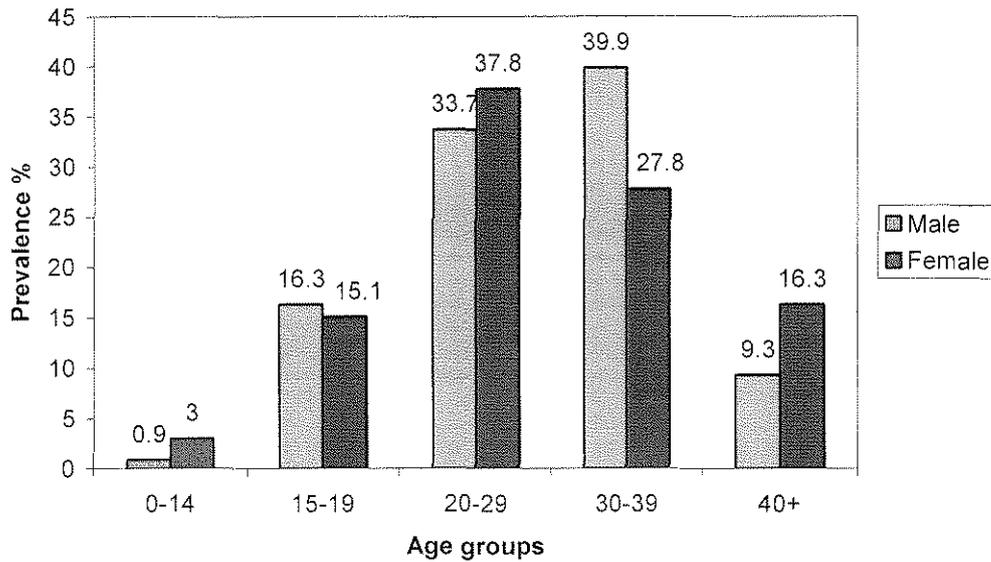


Figure 2: Overall STI prevalence by age and sex

When the data in Figure 2 were assessed, it was found that there was a significant association between age and prevalence of various STIs, chi-square (40) = 280.06,  $p < 0.001$ . More specifically, urethral discharge (Code 1) and (lower abdominal pain (Code 4) were highest among those 30-39 years old and over 40 respectively, whilst vaginal discharge (Code 2), genital ulceration (Code 3), HIV related (Code 9), other STIs (Code 10) and not STI (Code 11) were highest among 20-29 year olds.

### 5.4 STIs and Sex

Out of the 1884 people who participated in the study 1302 were females and 582 were males. This indicates that there was a significantly higher STI prevalence of females using PHC centers in the selected sites than their male counterparts, chi-square (10) = 1597.93,  $p < 0.001$ . More specifically, as expected urethral discharge (Code 1) was found only among males while vaginal discharge (Code 2) and lower abdominal pain

(Code 4) among females. In addition, STIs such as HIV related (Code 9) , other STIs (Code 10), and not STI (Code 11) were more prevalent in males.

### 5.5 STIs and Geographical area

More of the STIs were found in urban PHC centers than rural ones. It is difficult to conclude that urban dwellers are utilizing STI services more than rural people given the fact that some of the sites are situated in city centers and serve people from both rural and urban communities. The difference between urban and rural communities is not significant . This comes to show how rural communities have changed.

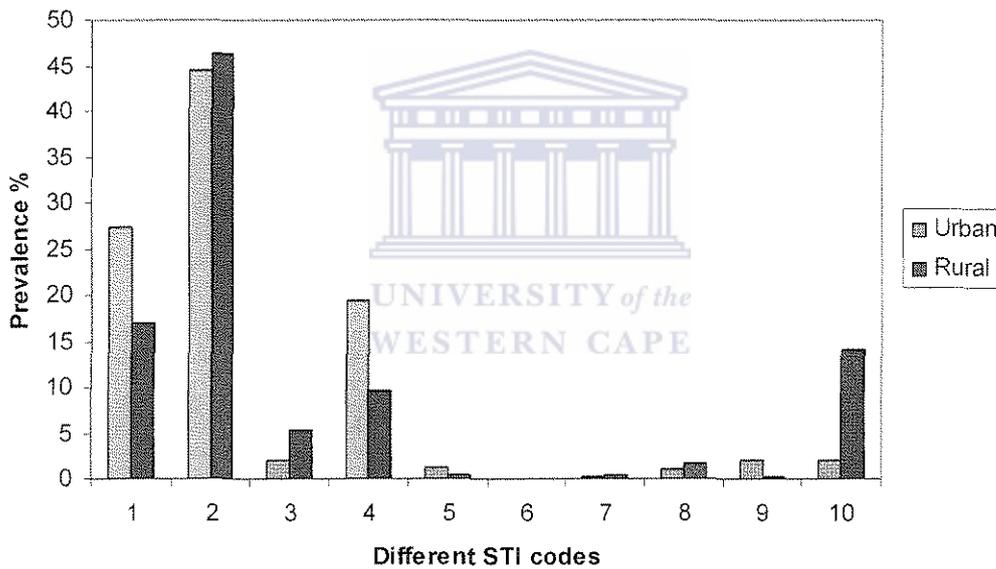


Figure 5: Geographical area and different codes

When the data in Figure 5 were assessed, it was found that there was a significant association between geographical location and prevalence of various STIs, chi-square (10) = 234.71,  $p < 0.001$ . More specifically, urethral discharge (Code 1), genital ulceration (Code 3), lower abdominal pain (Code 4), inguinal swelling (Code 5), and

HIV related (Code 9) were significantly more prevalent in urban areas than rural ones while the opposite was true for other STIs (Code 10) and not STI (Code 11).

## 5.6 Chapter Summary

This chapter presented the results of the present study. Looking at the distribution of STIs according to age, gender and geographical location of STI clients. The results as presented in this chapter highlight that women between ages 20-39 had highest STI prevalence and that the prevalence was slightly higher in urban areas than rural ones.



## CHAPTER 6

### Discussions

#### 6.1 Introduction

This chapter discusses the findings of the present study. It starts with a summary of the findings of the study and then gives some explanations of the findings with reference to previous research conducted in this area. The rest of the chapter discusses about the limitations of the study, the generalisation of the findings, future research and recommendations.

#### 6.2 Summary of the main findings

The main findings from the present study were as follows.

- a) Most frequently encountered female syndromes were vaginal discharge and lower abdominal pains and most frequent male syndrome was Urethral discharge. Other syndromes accounted for less than 10% of the STI cases observed at the PHC centres during the study.
- b) More STI patients were seen at urban PHC centres compared to rural ones.
- c) Most of the STI patients seen at PHC centres were women.
- d) STI prevalence was highest in 20-29 age group especially among females compared to all other groups.

#### 6.3 STIs and Age

In this study it was discovered that STI prevalence was highest in 20-29 age group compared to all other groups. These findings are partially consistent with those of the other studies in literature review (e.g., see Leroy, 1995; Warner, 1989) in that that in those studies the prevalence rate was highest among adolescents aged 15-19 and young adults between 20-24 years. The high STI prevalence of the present study is a

major concern. Given the reality of HIV/AIDS in our country the high prevalence of risky sexual behaviour in this age group. This is a group of young adults who are almost ready to take big responsibilities within the society. They are the people who should be taking key developmental roles for a country to have sustainable growth. Having high STI prevalence means these people are at risk of contracting HIV as well which will shorten their life span. Though this was not measured directly in this study, it is highly likely that a significant percentage of the 20-39 age group are already parents. Should they be infected with HIV/AIDS they might die leaving a generation of children to be raised by grandparents or left on their own in child headed households. Despite the efforts made by both the government and non-profit organizations to educate communities about protected sex, people continue to engage in risky behaviours. These findings indicate minimal utilization of barrier methods like condoms. Though an individual choice condom use is largely influenced by a lot of societal beliefs. It has different meaning to different people. For example, some people would not want to use protection because they want to have children. Which makes a lot of sense but the decision is not accompanied by necessary actions like ensuring that they do not contract STIs. The access to condoms and proper education about the usage could also impact in the way condoms are used in communities. Some PHC centres do not take time to give clients condom use demonstrations or education resulting in condoms being used as balloons by younger kids. The government is supplying free condoms nationwide yet there are still PHC centres that do not have this service. It could however be argued that having access to and being educated on how to use condoms will not mean that the war against STIs is successfully won. Other issues do come to play that can undermine all these efforts. For example, negotiating condom use with a partner could be a major challenge for most people in

different communities. It is an issue where you see both gender and power issues taking centre stage.

#### **6.4 STIs and Geographical Area**

There was no significant difference between STI prevalence and geographical location, though it was a bit higher in urban areas than rural ones. As it has been argued in the literature review, rural communities have changed a lot over the years. They no longer stick to traditional rules which forbid sex before marriage. This change in turn put people in danger of contracting STIs including HIV/AIDS. The social environment that young people grow up in does influence their behaviour. Risk taking and other personal attributes of adolescents and youth that relate to health do not occur in a vacuum, for young people interact with a social environment that shapes their thoughts and behaviour (WHO, 1998). In South Africa the social environment of young people today is substantially determined by the apartheid policies of the pre-1994 era. Some of the effects of these policies were to separate families from each other, limit access to education and distribute economic resources such that black people (especially those living in rural areas) were systematically disadvantaged. A lack of opportunities reduced the extent to which positive social influences could prevail, for example, through sports and other leisure activities. The rise in rural STI prevalence among adolescents could be associated with this lack of opportunities in these communities. In these communities there is a lack of recreational facilities for children to enjoy themselves. Due to this lack, sex becomes the only source of entertainment.

#### **6.5 STIs and Gender**

Gender differences are pronounced in this study with women at highest risk between the ages of 15 and 39. This came as no surprise as more females than males come to PHC centers on regular basis. This could be due to the fact that women have other reproductive issues like family planning, antenatal care, and pap smears that often bring them to the PHC centers. The situation could also be associated with the fact that in provinces such as the Eastern Cape most women are stay home mothers while most men spend most of day's time at work, therefore women are better able to go to PHC centers. However, this minimal utilization of PHC centers by men is something that needs to be observed closely. It is possible that there are any other facilities with similar services that men utilize. This kind of information will assist government's attempts to improve delivery of service. No graph is necessary at all here because of very few data which are involved. Simply provide the breakdown in the text at the start of the paragraph.

Literature reviewed in this study also confirms a high prevalence rate among women. It could be argued that most of those studies were conducted solely on women attending antenatal care. There are a number of factors that continue to make women susceptible to this STI epidemic. These include the low status of women in society and in relationships, economic dependency and the threat of physical force in particular, all of which make it difficult for women to protect themselves from the infection. The higher prevalence in women could also be associated with the fact that women have the opportunity to present to the clinic more often than men due to the fact that they need to come for family planning and antenatal care. So they use this opportunity to seek help if they have something unusual on their bodies. Gender stereotypes could also be associated with this issue. The fact that there are more female than male nurses might cause reluctance in some men to go to PHC centres.

Some men (due to socialisation) are uncomfortable with sharing their sexual problems with female nurses. For this reason they choose not to come forward for treatment. Nurses reported that in situations where they are forced to come (when the STI is severe) men only demand injection and tablets refusing to be examined by the nurses. The use of private clinics and doctors is also another reason for this underutilisation of PHC centres by males. In such situations the idea of male clinics could attract a lot of males to reproductive health care. Presently they are very few in disadvantaged communities.

### **6.6 Recommendations**

The low rate of STI prevalence in the 0-14 years could be considered a call for help. The design of adolescent friendly programmes for prevention of STI including HIV is a matter of urgency. Such programmes should be accessible to all adolescents from the age of 12 upwards. There is a widely held belief that if sex education is introduced before a person is sexually actually active, the person is less likely to engage in risky sexual behaviour later in life (Grunseit & Kippax, 1999). It is evident that the onset of sexual activity is around age 15. This is the age when most adolescents start dating and with the lack of sex education nothing stops them from engaging in risky behaviours. In South Africa, mostly in African households sex is still a taboo subject. People are not comfortable talking about sex and sexuality issues. As a result, children do not get to learn about reproductive health issues. If they do hear about them it is definitely not from their parents. Peer education most of the time is not proper. It comes with pressure and most teenagers always learn by experimenting with things. There is therefore a need for the government to intervene in terms of making sure that not only adolescents get to learn about reproductive health but parents as well. They need to be taught ways of communicating about reproductive health issues with their

children. More especially issues relating to STIs including the life threatening HIV/AIDS. It has been argued that adolescents are particularly vulnerable to contracting STIs for a number of reasons. Adolescent relationships tend to be less stable and access to appropriate health services and supplies are often difficult for this age group. In addition adolescent girls have an increased risk of acquiring STIs because their vaginal physiology (i.e., low vaginal acidity and immature vaginal lining) makes them more susceptible to infection than adult women. Hence it is crucial to provide adolescents with information, education and counselling on safer sexual behaviour together with easy access to treatment and protection methods as necessary (Foy,& Dickson-Tetteh, 2001).

Effective implementation of the syndromic management approach could also help combat the spread of STIs especially health education and counselling, condom promotions as well as partner notification.

Female controlled methods such as vaginal microbicides and female condoms could also be an important way of protecting female partners of interrupting STI transmission. Other components of syndromic management such as partner treatment, condom promotion and counselling to prevent new infections must be successfully implemented.

## **6.7 CONCLUSION**

This study has demonstrated that a lot still needs to be done to combat the spread of STIs and that STIs continue to pose a challenge to people's health here in South Africa. Women in this study were found to be at high risk when compared to men. It has also shown that STI prevalence continues to be high in urban areas and that young adults are most likely to contract these infections.

Given the current HIV prevalence here in South Africa, it is crucial for the government especially at provincial level to make use of this kind of information to control STIs. Reviewing the implementation of the syndromic case management approach is among the things that are very important in the fight against STIs. Provision of proper counselling and information needs to be stressed.



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## Appendices



DOH/MRC STDs HEALTH CARE-SEEKING BEHAVIOUR RESEARCH PROJECT

SEXUALLY TRANSMITTED DISEASES PROFILE - DAILY REPORT

DISTRICT: \_\_\_\_\_

CLINIC: \_\_\_\_\_

DATE: \_\_\_\_\_

CODE	CLINICAL SYNDROME	MALE							FEMALE						
		NEW EPIS.	0-14 YRS	15-19 YRS	20-29 YRS	30-39 YRS	> 40 YRS	FOLL. UP	NEW EPIS.	0-14 YRS	15-19 YRS	20-29 YRS	30-39 YRS	> 40 YRS	FOLL. UP
01	Urethral discharge/dysuria								/	/	/	/	/	/	/
02	Vaginal discharge without lower abdominal pain	/	/	/	/	/	/	/							
03	Genital ulceration														
04	Lower abdominal pain in women	/	/	/	/	/	/	/							
05	Inguinal swelling without ulcer														
06	Itching glans/foreskin balanitis/balanoposthitis								/	/	/	/	/	/	/
07	scrotal swelling/pain								/	/	/	/	/	/	/
08	Genital warts														
09	HIV related disease														
10	Other STD (Pubic lice, genital scabies, molluscum, contagiosum and sexually acquired enteric infections)														
11	Not STD														
TOTAL															

APPENDIX A

DOH/MRC STDs HEALTH CARE-SEEKING BEHAVIOUR RESEARCH PROJECT

**SEXUALLY TRANSMITTED DISEASES PROFILE - MONTHLY REPORT**

DISTRICT: \_\_\_\_\_ CLINIC: \_\_\_\_\_ MONTH: \_\_\_\_\_

CODE	CLINICAL SYNDROME	MALE							FEMALE						
		NEW EPIS.	0-14 YRS	15-19 YRS	20-29 YRS	30-39 YRS	> 40 YRS	FOLL. UP	NEW EPIS.	0-14 YRS	15-19 YRS	20-29 YRS	30-39 YRS	> 40 YRS	FOLL. UP
01	Urethral discharge/dysuria							/	/	/	/	/	/	/	/
02	Vaginal discharge without lower abdominal pain	/	/	/	/	/	/								
03	Genital ulceration														
04	Lower abdominal pain in women	/	/	/	/	/	/								
05	Inguinal swelling without ulcer														
06	Itching glans/foreskin balanitis/balanoposthitis							/	/	/	/	/	/	/	/
07	scrotal swelling/pain							/	/	/	/	/	/	/	/
08	Genital warts														
09	HIV related disease														
10	Other STD (Public louse, genital scabies, molluscum, contagiosum and sexually acquired enteric infections)														
11	Not STD														
TOTAL															

APPENDIX B

## TESTS

### LABORATORY TESTS RESULTS RECEIVED

STD	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
Syphilis			/	/
Gonorrhoea			/	/
Chlamydia			/	/
HIV				

### CONTACT SLIPS

Number of contact slips issued	
Number of contact slips received	



### STD ATTENDERS

Total STD attenders:	Male	Female

### CLINIC ATTENDERS

Total clinic attenders:

COMPILED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_