PATIENT PREFERENCES
FOR PARTNER
NOTIFICATION OF
SEXUALLY
TRANSMITTED INFECTIONS

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A research report submitted to the Faculty of Health Sciences, University of Witwatersrand, in fulfillment of the requirements for the degree of

Master of Science in Nursing

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DECLARATION

I, Marubini Patricia Nevhutalu declare that this research report is my own work in the branch of Health Sciences at the University of Witwatersrand Johannesburg. It has not been submitted before for any degree or examination at this or any university.

Signature______________

Date__________________
DEDICATION

This work is dedicated to my family, husband and children.
ACKNOWLEDGEMENTS

I wish to extend my heartfelt gratitude to the following people whose efforts and contributions led to the successful completion of this study.

Dr. Candice Harris my supervisor for providing invaluable guidance and support.

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Participants who made this research possible
ABBREVIATIONS

ANC – African National Congress

GU – Genital ulcer

HREC – Human Research Ethics Committee

HIV and AIDS – Human Immune deficiency virus and acquired immune deficiency Syndrome

DISCA - District STI Quality of Care assessment

STI – Sexually transmitted infections

NICD – National Institute for Communicable Diseases

UMS – urethral male syndrome
ABSTRACT

Sexually transmitted infections (STI’s) are a major public health problem. If STI’s are not treated they can cause infertility, long term disability and death. Partner notification and partner treatment have been identified as important aspects of management to curb the chain of transmission, reinfection and complications of STI’s.

The high prevalence of STI’s and low partner treatment rate is cause for concern. The ability to communicate with sexual partners about going to the clinic for treatment is the cornerstone in breaking the chain of reinfection and preventing complications.

The aim of the study was:

• To determine the percentage of patients presenting as a result of partner notification.
• To describe the demography of patients attending the STI clinic.
• To determine the preferred methods of partner notification from the perspective of being a patient and from the perspective of being a sexual contact/partner.

The study is a replication of the study entitled ‘Patient Preferences for Partner Notification of Sexually Transmitted Infections by (Apoola, Radcliffe, Das, et al.,2006:327).’ The study is a quantitative, descriptive, survey design, and a replicated self-administered questionnaire of the study was used. The sample of 162
patients was taken from a population of about 800 STI clinic attendees over a period of one month at a local public sector clinic in Johannesburg.

Data was captured using an excel spread sheet and then were exported to the Stata Release 11 program for analysis. Data was summarized using frequencies, means, and percentages.

Reliability, validity and ethical issues were taken into consideration.

From the results of the study it became apparent that the majority of STI patients 156(96%) attending the STI clinic under study preferred to inform their partners themselves that the partner may be at risk of an STI and should receive treatment. Furthermore, the participants in this particular study would also prefer to be informed by their partner if they were potentially at risk of contracting a sexually transmitted infection. With respect to the demographics of the clinic attendees, the majority of the patients attended the clinic because they presented with signs and symptoms of what they believed to be a sexually transmitted infection (92%), and only 8% of the participants attended the clinic because they were informed by a partner that they have been potentially exposed to an STI. It was identified that 92% of participants did have cellular telephones, and this is potentially a good means of partner notification given that the majority of the research sample had access to cellular telephones. In conclusion the participants in this particular study would prefer to notify their partner themselves of the potential exposure to a STI as opposed to other means of partner notification.
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CHAPTER ONE
OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

Sexually transmitted infections (STI’s) remain a major health problem worldwide. Partner notification has been accepted as an important management strategy for prevention and control of STI’s. Partner notification is a process of notifying a partner that they are at risk of acquiring a sexually transmitted infection and should therefore report at the clinic for evaluation and treatment to prevent further infections (Trelle, Shang, Nartey, Cassel and Low, 2007:1). All patients treated for STI’s in Gauteng clinics are given partner notification letters for their partners. Despite partner notification letters only 20 – 22% of partners receive STI treatment (Gauteng Health Information Management Report, 2010/11). This leads us to question the effectiveness of the current partner notification letter that is in use in all primary health care clinics.

HIV and AIDS has become a priority public health issue and STI’s are not given the attention they deserve. There is a need to strengthen our prevention and management strategies as studies have indicated that STI’s facilitate the transmission of HIV and AIDS (Molapo, Maja and Wright, 2007:22).

1.2 BACKGROUND TO THE STUDY

1.2.1 Sexually transmitted infection services in South Africa

It is clear that STI’s constitute a major health problem in South Africa. It is estimated that every year 1.5 million people are treated for STI’s in the public health sector (National Health Information Management report, 2010/11). Many more are seen in
the private sector as well as the occupational health setting. Gauteng Health Information Management indicates that all Primary Health Care clinics offer STI services. Youth Friendly Services, a programme which incorporates adolescent friendly health services has also been rolled out in all provinces.

1.2.2 The role of partner notification in STI management

Control of STI’s is a key intervention in the fight against HIV and AIDS. It is one of the priorities identified by the National Department of Health. In order to control STI’s efficiently; partner notification is essential and is an important aspect of management. It is a means of informing partners about their exposure to STI’s and advising them to present themselves at the clinic for evaluation and treatment. Partner notification is based on the premise that the partners are also likely to be infected. Some may be asymptomatic and may not seek treatment, thus it is important that they are told to go to the clinic for evaluation and treatment (Volmink, 2002:2).

Partner notification prevents reinfection and transmission within a sexual network i.e. a vicious circle of sexual partners infecting each other with STI’s. Complications of STI’s can be avoided if all clients who are notified would go for evaluation and treatment.

Standard approaches for partner notification include:

(1) Patient referral, this is the method whereby patients notify their partners and refer them for treatment.

(2) Provider referral, here the provider sends a letter or phones to notify partners to attend the clinic.
(3) Patient delivered partner treatment, where the patient delivers appropriate medication to the partner in the hope that the partner will later go to the clinic for evaluation (Alam, Chamot, Vermund, Streatfield and Kristensen, 2010:1 and Khan, Fortenberry, Juliar, et al., 2005:2).

1.2.3 STI trends in South Africa

There are 31 STI Sentinel Surveillance sites in Gauteng. The measuring of STI trends in South Africa was done through the STI surveillance sites. All sites compiled monthly STI statistics which were submitted to the National Institute for Communicable Diseases (NICD). This body monitors STI trends in Gauteng. Reports have shown that STI’s are higher in women between the ages of 24-35 years. Gauteng Health Information Management annual reports (2010/11) have indicated that vaginal discharge and abdominal pains syndromes are the most common conditions in females. These trends occurred in densely populated areas especially associated with migrant workers and informal settlements.

1.3 PROBLEM STATEMENT

Patients with STI’s are treated daily in various public health facilities. All patients are then given partner notification letters and are also advised to notify their partners to come for treatment. The primary aim of partner notification is to give treatment to those who have been exposed and also to find and treat new STI cases. Partners could then go to either public or private institutions including private pharmacies, for treatment. The problem in Gauteng is the low partner treatment rate of between 20.9 – 21.9% recorded by Gauteng Health Information Management, 2011 statistics. This means that despite the fact that all patients were given partner notification letters, few
patients go to the clinic as a result of partner notification. This is a concern in Gauteng and in other provinces (National/Provincial Information Management, 2010/11). Considering the fact that patients go for STI treatment either public or private institutions including private pharmacies, the government urges public facilities to aim at treating at least 40% of individuals exposed to a partner with an STI (National/Provincial Data Element Dictionary 2010). This is an effort aimed at reducing STI infections and improving partner notification rate.

A standardized partner notification slip was designed in all languages as one of the management strategies stated in the guidelines (National Department of Health First line comprehensive management guidelines and control of STI’s, 2007:3). Refer to Annexure G for partner notification letter. Due to the persistent low partner treatment rate recorded in the past few years it was necessary to determine the patient’s preferences for partner notification regarding sexually transmitted infections.

1.4 RESEARCH QUESTION

The following research questions arise:

- What percentage of patients present as a result of partner notification?
- What is the demography of patients attending the STI clinic?
- How do STI patients prefer to notify their partners?
- What are the preferred methods of partner notification from the perspective of sexual contact?

1.5 AIM OF THE STUDY

The aim of this study was to determine patient’s preferences for partner notification regarding STI’s
1.6 RESEARCH OBJECTIVES

The research aim was achieved by means of the following research objectives:

- To determine the percentage of patients presenting at the clinic as a result of partner notification;
- To describe the age, gender and marital status of patients attending the STI clinic;
- To determine the preferred methods of partner notification and;
- To determine the preferred methods of partner notification from the perspective of sexual contact.

1.7 SIGNIFICANCE OF THE RESEARCH

Sexually transmitted infections including HIV and AIDS constitute a major reproductive health burden for sexually active individuals. According to a study conducted by Stephens, Bernstein, Katz, Phillip, and Klausher (2009:525) partner notification is essential in controlling STI’s. The World Health Organization has also reported that effective STI control leads to the decline of new STI’s, HIV and AIDS infections (WHO, 2005:210). If partner notification is practiced effectively the burden of disease attributable to STI’s can be reduced. The research study will establish the preferred method of partner notification. It will also be established whether there is a need to explore other methods of partner notification.

1.8 RESEARCHER’S ASSUMPTIONS

Assumptions are basic principles believed to be true on the basis of logic and reason without requiring proof or verification (Polit and Beck. 2006:14).

1.8.1 Meta-theoretical assumptions
The researcher makes meta-theoretical assumptions about society, health, the nurse and the patient.

**Society** - Society is the general population who attend the Esselen clinic. This is the society from which the sample was drawn. From the societies point of view a study by Caffery and Forrest, (2009:1) indicated that some societies have expressed stigma, confusion and anxiety towards some STI’s.

**Health** – This is the state of being to which we all aspire. It is the absence of disease, in this case absence of STI symptoms.

**The nurse** – This is the one who cares for the sick. The nurse’s point of view is that STI’s are serious conditions that can lead to complications if not treated.

**The patient** – Refers to all persons who have attended the clinic and have an STI problem. For a person to seek medical attention there must be a motivation. Anxiety or stigma may delay the patient from seeking medical attention.

1.8.2 Operational definitions

**Sexually Transmitted Infections (STI)** – Sexually transmitted infections are infections that can be transmitted from one person to the other through sexual contact (WHO, 2005:11).


**Sexually transmitted infection (new)** – a patient treated for new symptoms of a sexually transmitted infection i.e. a patient may have been treated successfully before but now has new symptoms (National/Provincial Data Element Dictionary, 2010).
Sexual contact/partner - a person with whom the STI patient is having a sexual relationship with and who is at risk of contracting a STI.

Partner notification slip – it is a written request to the STI patient’s partner to attend the clinic for STI treatment. A patient with several sexual partners will be given several partner notification slips.

Sexually transmitted infection partner notification rate – partner notification slips issued expressed as a percentage of all STI patients treated and given a partner notification slip.

Sexually transmitted infection partner treatment rate – percentage of all new STI episodes treated that were referred by their partners (National/Provincial Data Element Dictionary, 2010).

Partner preference - Method of partner notification for sexually transmitted infections preferred by STI patients and their partners.

1.8.3 Methodological Assumptions

The research methodological sequence below was followed as described in Burns and Grove, (2008:37).

Review relevant literature
   ↓
Developing a framework
   ↓
Defining research variables
   ↓
Making assumptions explicit
   ↓
Selecting research design
   ↓
Defining the population and sample
   ↓
1.9 RESEARCH METHODOLOGY

A summary of the research design and method is provided. A detailed description of the research design and method is provided in chapter 3.

The study was a replication study on patient preference for partner notification for a sexually transmitted infection. The study was previously conducted in the United Kingdom by (Apoola, Radcliffe, Das, et al., 2006:327). The research site was selected from the 6 clinics in central Johannesburg. Simple random sampling was done by writing the names of the 6 clinics on slips of paper. Names were placed in a container and mixed well. One slip was drawn and that was the clinic selected for the study. A sample of 162 patients was selected from patients who had attended the Esselen STI clinic. Systematic sampling was done to select participants. The first participant was
selected randomly; thereafter every third patient was selected for the study until the sample size was reached.

A replicated self-administered questionnaire was used. Only minor changes were made to the original questionnaire. The questionnaire asked demographic information, why the patient came to the clinic, accessible forms of communication, number of partners, whether the participant had previous episodes of STI’s or not and the preferred method of partner notification.

Reliability and validity were ensured. Questions were relevant to the subject and a pilot study was conducted. No problems were experienced with the questionnaire during the pilot study. As this was a replication study, reliability and validity were previously tested. The tool was found to be valid and realistic in the previous study.

1.10 ETHICAL CONSIDERATIONS

Ethical principles were adhered to. Ethical considerations will be discussed in detail in Chapter Three. Approval was granted by the Human Research Committee of the University, Postgraduate Assessor Committee of the University, Gauteng Provincial Office and Johannesburg Metro Local Authority. Written informed consent was provided. Privacy and confidentiality were ensured. Numbers were used instead of names. Participants were allowed to leave at any stage of the research without penalty if they so wished.

1.11 OVERVIEW OF RESEARCH REPORT

1.11.1 Chapter 1 Introduction and background

In this chapter STI’s are seen as a major problem worldwide as stated by Alam et al., 2005. The issues underlying these problems have been given as urbanization, low
socioeconomic status of women, cultural practices in different societies. The above issues have an influence on partner notification. It is generally accepted that partner notification plays an important role in the management of STI’s. Irrespective of the fact that all public health facilities offer partner notification letters to all STI patients seen, the percentage of patients coming to the clinics for treatment as a result of partner notification ranges between 20.9-21.9%. The question is how do STI patients want to notify their partners? The study aim and objectives are presented in chapter one as well as a brief overview of the study design and method.

1.11.2 Chapter 2 Literature review

The World Health Organization sets standards and norms for the management of sexually transmitted infections. Partner notification is a strategy that is recommended in the management of STI’s (WHO, 2003:21). The Gauteng Department of Health supports these standards by prescribing protocols of STI management that includes partner notification as a management strategy. Despite all these efforts very few partners go to the clinic for treatment. It is also indicated that even developed countries are experiencing a low partner treatment rate of 40-60%. The impact of STI’s as evidenced by poor quality of life, pregnancy related infections and congenital abnormalities is huge (Johnson, Bradshaw and Dorrington, 2007:2).

1.11.3 Chapter 3 Methodology

A quantitative, descriptive, replicated, survey was conducted to determine the preferred methods for partner notification of a sexually transmitted infection. The population consisted of all patients who have come to the clinic with an STI problem. STI problems included patients with symptoms of an STI, patients referred by partners, patients who came for STI check up with no symptoms and patients who
came for STI follow up. Systematic sampling was done to choose participants. Ethical principles were adhered to. Data was collected at Esselen clinic using self-administered questionnaires. Data analysis was done using Stata Release 11 program, 2009.

1.11.4 Chapter 4 Findings of the study and discussion

The study was conducted from August to September 2011. 162 questionnaires were returned. The research findings and discussion thereof is presented in chapter 4.

1.11.5 Chapter 5 Conclusion, recommendations and limitations

Conclusions, recommendations and limitations are presented in chapter 5.

1.12. CONCLUSION

The background to the research has been described. The problem statement, research questions, research objectives and the significance of the research were discussed.
CHAPTER TWO
LITERATURE REVIEW

2.1. INTRODUCTION
Partner notification has been used as an important step in the management of STI’s since the 19th century. It is also recommended by the World Health Organization (WHO) a coordinating authority for health which sets norms and standards for the management of sexually transmitted infections. Experiences in developed countries reveal that various approaches have been used and that no single approach has been found to be effective for all settings. It is thus important to explore the feasibility and acceptability of different approaches of partner notification to suit different settings (Alam, et al., 2010:2).

2.2. OVERVIEW OF SEXUALLY TRANSMITTED INFECTIONS

2.2.1. Definition of sexually transmitted infections
Sexually transmitted infections are infections passed from person to person through sexual contact.

2.2.2. Epidemiology of sexually transmitted infections.

Worldwide epidemiology
Sexually transmitted infections are among the most common infections in the world. Worldwide most adults acquire at least one STI in their lifetime. Many are at risk of complications from STI’s. In the United States 6.2 million people acquire genital human papilloma virus (Kasper and Fauci, 2010:283).

South African epidemiology
It has been reported that STI’s account for over 26% of deaths in South
Africa. Most of this burden (98%) is due to HIV and AIDS. Currently South Africa faces one of the largest STI epidemics in the world (Johnson, Bradshow and Dorrington, 2007:2). Studies conducted in Carletonville Western Gauteng by Williams, Taljaart, Campbell, et al., (2003:2103) have indicated that the incidence of STI’s is increased in informal settlements and mining areas.

2.2.3. International Demography

A study cited by (Elewad, 2009:159) showed that the ages of patients attending the geniti-urinary clinic range from 17 -71 years in males and females 14-60 years. Those who came specifically for STI checkup were 50.5% females and 45.6% males.

2.2.4. Transmission of sexually transmitted infections

By definition STI’s are transmitted through sexual contact. Transmission of STI’s can also occur transplacentally from mother to baby during pregnancy and during birth if the mother has a discharge or an ulcer in the birth canal.

2.2.5. Risk factors for the transmission of sexually transmitted infections

Multiple partners, risky unprotected sex, alcohol and drug abuse result in risky sexual behaviour. Commercial sex workers are more at risk especially those who are not screened regularly (Sethwala, Mulla, Kosambiya et al., 2009:1).

2.2.6. Types and classification of sexually transmitted infections

Types and classification of STI’s is done according to the common causative agents of the disease or can be grouped by the signs and symptoms they cause (National Department of Health First Line Comprehensive Management and Control of STI’s Protocol, 2007:1).

- Vaginal discharge syndromes
These include all types of vaginal discharge, dysuria and vulval itching. Vaginal discharge flowcharts are designed to identify and treat the most common causes of vaginal discharges in females, which are bacterial vaginosis, trichomoniasis and monilial infections (WHO, 2005:98). Up to 50% of women of reproductive age in developing countries are reported to have bacterial vaginosis (Kasper and Fauci, 2010:283).

- **Urethral discharge syndromes (UDS)**

  The most common causes of urethral discharge in males are gonorrhea and Chlamydia. Urethral discharge presents with urethral discharge and dysuria (WHO, 2005:99).

- **Genital ulcers (GU)**

  A patient with genital ulcers presents with a genital sore or ulcer with or without pain. Syphilis and chancroid are among the most common causes of genital ulcers, (WHO, 2005:99). Reports cited by Kasper and Fauci, (2010:283) have shown that sexually transmitted herpes simplex virus is the most common cause of genital ulcers throughout the world. Studies by Johnson, Coetzee and Dorrington, (2005:1) and Lai, Chen, Morse., Htun, Fehler, Liu and Ballard, (2003:1) have also indicated that herpes simplex virus type 2 has emerged as the most common cause of genital ulcer disease in most patients from a mining community in Carletonville, South Africa.

- **Other – herpes genitalia and HIV**

  Patients suspected of herpes genitalia usually present with a history of recurrent ulcer, which starts as a cluster of blisters. Patients with HIV can
present with atypical complicated ulcers that take longer than the expected time to heal (WHO, 2005:110).

2.2.7. Syndromic approach to sexually transmitted infections

In 1983 changes were made in the diagnosis and management of STI’s. Management of STI’s has since changed from the treatment of a specific infection to management based on the presenting signs and symptoms and associated risk factors. This is a multifaceted strategy for comprehensive STI management covering all possible etiological agents for a particular syndrome. The strategy is comprehensive as it covers the classification of syndromes by the nurse or doctor, partner notification and treatment, counseling and condom promotion. Treatment is based on treating the organism most commonly responsible for each syndrome. The World Health Organization has developed flowchart/algorithms to help guide health care providers to reach a diagnosis and manage the patient using the syndromic approach (Diagnosis and Management of common STI’s, 2007:284 and WHO, 2005:99).

2.2.8. Management of sexually transmitted infections

The management of STI’s is implemented according to National Department of Health protocol and guidelines. Each and every health worker in South Africa is expected to follow these protocols and guidelines for the management of STI’s.

2.2.9. Complications of sexually transmitted infections

STI’s can cause devastating complications such as scarring of the fallopian tubes resulting in ectopic pregnancy and infertility, conjunctivitis, hepatitis and HIV. Infections due to syphilis can cause congenital abnormalities in babies. These complications have financial implications and also cause pain to the patient
2.2.10. Relationship between STI’s and HIV

It is reported that the presence of a STI especially an ulcer facilitates the entry of HIV into the body. STI’s also cause an inflammatory response in the genital tract which also promotes the successful transmission of HIV (Evian, 2007:14).

2.3. PREVENTION AND MANAGEMENT APPROACHES

2.3.1. International approach for the prevention and management of sexually transmitted infections

Developed countries such as the United Kingdom have partner treatment rate of between 40 – 60% leading to a persistently high infection rate and reinfection as reported by Detels, Mc Ewen, Beaglehole, et al., (2002:1449). The authors also state that notification is a very important management strategy aimed at reducing the burden of asymptomatic disease in a community, as well as shortening the period of infectiousness and therefore breaking the chain of transmission of STI’s.

Some evidence was reported by Estcourt, Sutcliffe and Shackleton (2009:601) that partner notification is a cornerstone of STI control in most countries. They further report that the challenge lies in developing an innovative, acceptable and feasible method of partner notification which would be applicable to current health settings.

As a coordinating body for health, the World Health Organization (WHO) sets international norms and standards for the management of sexually transmitted infections. Partner treatment and partner notification is still recommended as the main management strategies for STI’s.
2.3.2. South African approach for the prevention and management of sexually transmitted infections

In an effort to prevent STI’s the South African government spends millions to promote condom use and to provide condoms to the public. According to the National Strategic Plan of South Africa (NSP 2007-2011:10) the prevention and control of STI’s is a key intervention in the fight against HIV and AIDS. The key focus of the NSP of SA is to reduce new STI’s and HIV and AIDS infections by 50% by the year 2011. Interventions that are needed to reach the aims of the National Strategic Plan include the notification and treatment of those infected as well as their partners.

2.3.4. National health policy on the prevention and management of STI’s

The National Health Plan as promulgated by the African National Congress (1994) stipulates that comprehensive health care services, including STI services, must be provided at community level free of charge (ANC. 1994:61). The National Department of Health had also developed STI management guidelines. First Line comprehensive Management and Control of STI’s protocol, (2007:1).

The guidelines emphasize the following:

- Provision of accessible STI services i.e. In terms of distance and consultation times.
- Collection of data regarding the number of patients seen.
- Provision of safe examination in terms of equipment and treatment.
- Provision of adequate staff and relevant training.
- Knowledge of correct treatment.
- Partner notification and treatment.
• Availability of condoms.
• Responding to all findings regarding the above and providing solutions.
• Availability of STI drugs.

The Gauteng Department of health also conducts a District STI Quality of care Assessment (DISCA) once a year in all Primary Health clinics to ensure that the above services are all rendered. Where there are shortfalls, plans with time frames must be in place to correct the shortfalls (DISCA, tool, 2000:5).

2.4. PARTNER NOTIFICATION

2.4.1. Definition of partner notification

Partner notification for the purposes of this study consists of a written request to the STI patient’s partner to attend the clinic for evaluation and treatment as they are at risk of contracting an STI.

2.4.2. Statistics related to partner notification

According to Gauteng Health Information Management report, (2010/11) all patients are given partner notification letters i.e. partner notification is 100%.

Developed world statistics

Developed countries like the United Kingdom are experiencing a low partner treatment rate of between 40 – 60% and this leads to a persistently high rate of infection and reinfection (Detels, Mc Ewen, Beaglehole, et al., 2002:1449). The authors also state that partner notification is very important as it is aimed at reducing the burden of asymptomatic disease in a community, shortening the period of infectiousness and therefore breaking the chain of transmission of STI’s.

South African statistics
Despite all patients given notification letters only 21.0-21.9% of partners come to the clinic for treatment (Gauteng Health Information Management Report 2011). Please refer to Table 2.1 for partner treatment rate in South Africa.

Table 2.1. Partner Treatment Rate

<table>
<thead>
<tr>
<th>STI Indicators</th>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner treatment rate</td>
<td>2007/08</td>
<td>21.0%</td>
</tr>
<tr>
<td></td>
<td>2008/09</td>
<td>21.4%</td>
</tr>
<tr>
<td></td>
<td>2009/10</td>
<td>21.9%</td>
</tr>
<tr>
<td></td>
<td>2009/11</td>
<td>21.8%</td>
</tr>
<tr>
<td></td>
<td>2011/12</td>
<td>22.9%</td>
</tr>
</tbody>
</table>

(Gauteng Health Information Management Report, 2012)

2.4.3. Purpose of partner notification

The purpose of partner notification is to notify all partners of STI patients about the risk of contracting an STI since they have been exposed. They are advised to come to the clinic for evaluation and treatment so as to prevent reinfection.

2.4.4. Types of partner notification

There are three main types of partner notification that are practiced in the United States of America and African countries. (1) Provider-oriented notification where health providers notify partners by sending a message via the post or telephonically. (2) Patient-oriented notification- here the patient delivers a note or message to her partner. (3) Mixed approach - in which patient will deliver a message, following which the health provider notify those partners who did not come for treatment. The feasibility and outcomes of these approaches depends on the type of health care
system, resources, economic status, stigma and discrimination against STI’s. Patient delivered partner therapy involves giving the patient treatment to give to their partner in the hope that the partner will eventually go to the clinic for further assessment and management. It is also understood that the health care provider will follow up those partners who do not present at the clinic within a specific period (Alam, et al., 2010:5 and Hogben, 2007:160).

2.4.5. Other studies on partner notification

Patient-delivered partner therapy has been effect in the United Kingdom. Other countries are taking advantage of advances in technology by using a short message system and e-mails (Sutcliffe, Brook, Chapman, et al., 2009:603).

2.4.6. Replicated study on partner notification

The replicated study entitled “Patient preference for partner notification” was conducted in the United Kingdom in. The study was conducted in 2006 by (Apoola, A., Radcliffe, K.W., Das, S., Robshaw, V., Gilleran, G., Kumari, B.S. Toothby, M. and Rajakumar. J).

Study design and method

The study was a quantitative study. A survey was carried out using a questionnaire.

Study population and sample

The population comprised patients attending three large genitourinary clinics in Derby, Birmingham and Coventry in the United Kingdom.

Data collection tool

A self-administered questionnaire was used to collect data.

Main findings
The most favored method of partner notification was patient referral i.e. patients want to notify their partners themselves. Patients who had access to cell phones and private e-mails preferred those methods of communication. Provider’s notification of partners by a letter asking them to contact the clinic was more acceptable than phoning, text messaging, or email informing them that they have an STI.

2.5. CONCLUSION

The epidemiology of sexually transmitted infections, prevention and management approaches of STI’s, and different methods of partner notification were discussed. New methods need to be explored. However, the settings in which they will be practiced should be taken into consideration.
CHAPTER 3
RESEARCH DESIGN AND METHOD

3.1. INTRODUCTION
A quantitative, descriptive, replicated, survey was conducted to identify preferences for partner notification of a sexually transmitted infection. The research process as described in Burns and Grove (2008) was applied in this study. An STI clinic in Hillbrow (Johannesburg) was randomly selected from six clinics to be the research site. A systematically selected sample of 162 participants who had attended the STI clinic was interviewed. Participants completed a replicated self-administered questionnaire which was previously used in a study in the United Kingdom (Apoola, et al., 2006:1). The objective of the study was to determine the preferred method of partner notification for a sexually transmitted infection and to determine the demography of patients attending the STI clinic.

3.2. RESEARCH DESIGN
A quantitative, descriptive, replicated, survey design was conducted as it was the appropriate method to get more information from individuals with the necessary experience.

3.2.1. Quantitative research

Definition of Quantitative research
Quantitative research is an objective systematic process that uses numerical data to obtain information (Burns and Grove, 2009:22).

Justification for the use of a quantitative design.
The data collected was counted in numbers.
3.2.2. Descriptive study design

**Definition of descriptive research design**

Descriptive research involves the provision of an accurate numerical account of the characteristics of a particular phenomenon. Descriptive data describes the characteristics of a specific sample of a population. Data such as age, sex, marital status were used to describe the sample.

A survey in simple language is a data collection tool e.g. a questionnaire is used to gather data.

**Justification for the use of a descriptive design.**

Descriptive research was found to be appropriate to this study in order to obtain information from individuals with the required experience.

### 3.3. RESEARCH METHOD

#### 3.3.1. Replication study

**Definition of a replication study**

Replication of a study involves repeating a study to determine if one will obtain similar results.

**Brief description of the study being replicated**

This study on “Patient preferences for partner notification of a sexually transmitted infection” was previously conducted in the United Kingdom. The same study was repeated in a different area using the same questionnaire with few changes.

**Justification for the use of a replication study**

A replication study was used as the study was looking at the same problem of partner notification as it was experienced in Gauteng. The researcher wanted to determine whether the findings will hold up in a different setting. The data collection tool had
already been validated and the researcher was not required to develop and validate a new tool.

### 3.3.2. Site selection

One clinic from the six clinics situated in central Johannesburg (Region F) was chosen.

*Overview of how the site was selected*

Gauteng has five districts, namely: City of Johannesburg, Westrand, Sedibeng, Ekurhuleni, and Tshwane-Metsweding. City of Johannesburg is divided into seven regions namely region A, B, C, D, E, F and G. Region F includes central Johannesburg. Any clinic in Region F was eligible for selection based on the residential accessibility of the researcher. An STI clinic in Hillbrow called Esselen clinic which is in Region F was selected using a simple random selection method. All the clinics in central Johannesburg had an equal chance of being selected. The clinic names were written on slips of paper and placed in a container, mixed well and then one slip was drawn (Burns and Grove, 2009:349). The STI clinic is one of the clinics in central Johannesburg. It offers comprehensive health services i.e. mother and child, chronic disease, TB, STI as well as HIV and AIDS services.

### 3.3.3. Population

The population for this study included all individuals attending the STI clinic who were 18 years of age or older who could provide informed consent in order to participate in the study.

### 3.3.4. Inclusion criteria

Inclusion criteria for this study were males and females 18 years and above who have come to the clinic for an STI problem.
3.3.5. Sample

A sample is a portion of the population considered for inclusion in a particular study (de Vos, et al., 2011:223). The sample was drawn from the population of patients who had attended the STI clinic.

Sampling method

The sampling method used for selecting the clinic was simple random sampling and a systemic sampling method was used for selecting participants.

Definition of sampling method

The sampling method is the process used to select participants or elements for participation in a study (Burns and Grove, 2009:349).

Justification for sampling method

The sampling method used was appropriate as it afforded subjects equal opportunities for selection to the study as regards the elements eligible for the study. The sampling process as described by Burns and Grove (2008) was followed.

Sampling of the participants

- Systematic sampling was applied. The first patient was selected randomly thereafter every Kth participant was selected e.g. every third patient was invited to participate in the research. This was done until the sample size was reached (Burns & Grove, 2008:352). The required sample size was calculated according to Stocker’s guidelines (de Vos et al., 2011:225). Refer to table 3.1 for calculation of sample size
Table 3.1. Calculation of Sample Size

<table>
<thead>
<tr>
<th>Population size</th>
<th>Percentage suggested</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>100%</td>
<td>20</td>
</tr>
<tr>
<td>30</td>
<td>80%</td>
<td>24</td>
</tr>
<tr>
<td>50</td>
<td>64%</td>
<td>32</td>
</tr>
<tr>
<td>100</td>
<td>45%</td>
<td>45</td>
</tr>
<tr>
<td>200</td>
<td>32%</td>
<td>64</td>
</tr>
<tr>
<td>500</td>
<td>20%</td>
<td>100</td>
</tr>
<tr>
<td>1000</td>
<td>14%</td>
<td>140</td>
</tr>
<tr>
<td>10000</td>
<td>4.5%</td>
<td>450</td>
</tr>
<tr>
<td>100000</td>
<td>2%</td>
<td>2000</td>
</tr>
<tr>
<td>200000</td>
<td>1%</td>
<td>2000</td>
</tr>
</tbody>
</table>

Population size was an average of 1150 patients seen every month at each of the six clinics in central Johannesburg. A sample of 14% was required, that is 162 participants.

The sampling process was as follows:

- Patients arrived in the morning at the clinic and were registered by a clerk.
- The clerk wrote the patient’s names next to an allocated number on a STI registration list i.e. the first patient arriving at the clinic was registered patient number 1.
- The researcher obtained a copy of the list of registered STI patients from the clerk on arrival in the morning.
- The researcher systematically selected every third patient on the STI registration list starting randomly at any number e.g. from patient number 1 i.e. 1, 4, 7, 10 etc.
• Patients who arrived after the researcher had collected a copy of the registration list were entered on a second registration list that was continued for the day. The researcher used the second list once she had completed the first list.

• An education session was first conducted for the selected group by the researcher. All patients were informed about the purpose of the study. Ethical issues were explained.

• Once the researcher had selected the patients she called patient number 1 out of the queue and gave information about the research and obtained consent in writing. Annexure E and F which were attached to the questionnaire.

• The next day the researcher continued as above selecting patient number 1, 4, 7, 10 etc. until the required sample size was achieved.

• Signed consent forms were filed and kept in a locked cupboard.

• Participants were given a questionnaire to complete (Refer Annexure D).

• Completed questionnaires were placed in a box on the table before the patient left the clinic. All questionnaires collected were locked in the cupboard at the end of the day.

Sampling size

According to Stocker's calculation, if the population size is 1000 then the sample should consist of 14% of the population. Averages of 1150 patients are treated for STI at the selected clinic every month. A sample of 14% i.e. 162 patients was therefore selected for the study (de Vos et al., 2011:225).

3.3.6. Data collection tool

The language of the tool was English. The researcher interpreted for those patients/participants who could not read English.
The data collection tool

The instrument used for this research was a replicated self-administered questionnaire. As this was a replication study the researcher utilized the same questionnaire as that used by Apoola et al., (2006). Refer annexure D. Questions asked were related to the following:

- Demographic data of the patient,
- Information regarding the reason for coming to the clinic,
- Type of communication that the patient has access to,
- Number of sexual partners;
- Previous episodes of STI and
- Preferred method of partner notification.

Definition and description of a self-administered questionnaire

A self-administered questionnaire is a document with questions and is completed by participants on their own. The researcher is available to clarify problems (de Vos et al., 2011:188).

Justification for the use of a self-administered questionnaire

A self-administered questionnaire in this study was the most appropriate as it was readily available. It is also less costly, it offers complete anonymity and it is less embarrassing.

Description of the self-administered questionnaire

The self-administered questionnaire comprised of questions regarding the demographic data of the participant, close ended questions regarding accessibility to methods of communication, number of partners, previous episodes of STI’s and degree of preferred methods of partner notification.
3.3.7. Changes made to the data collection tool

Changes were made to the original questionnaire. The questions related to ethnicity and sexual orientation was deleted.

Justification for changes made to the data collection tool

The researcher felt that questions on ethnicity and sexual orientation would not add value to the research and participants may feel offended, given the South African constitution.

3.3.8. Data collection method

Description of the data collection method

A self-administered questionnaire was given to those patients who had been selected and had given consent. Questionnaires were distributed by hand to the participants. Instructions on how to fill in the questionnaire were given. The questionnaire took 10 to 15 minutes of the patient’s time to complete. (This was verified during the pilot study). Interpretation of the questionnaire in other languages was done by the researcher for those patients who could not read English. Participants were supervised throughout and problem areas were clarified. Participants were requested to place the completed questionnaires in an allocated box before they left the clinic. The box with completed questionnaires locked in a safe place to ensure confidentiality. Participants were verbally thanked for their participation. Biscuits and juice was also available as an expression of gratitude.

3.4. PILOT STUDY

3.4.1. Justification for the pilot study

The pilot study was conducted in order to detect and solve problems before the main study is conducted.
3.4.2. Manner of conducting the Pilot study

A small-scale trial research was done at the clinic selected for the main research. 10% of the required sample was systematically selected, which was 16 participants. This was done for the researcher to orientate herself to the study being undertaken. This experience allowed the researcher to test the feasibility of the study. No difficulty was experienced with the instrument and no corrections were made. Due to the fact that there were no changes made to the questionnaire following the pilot study, participants in the pilot study formed part of the main study.

Participants were timed when filling the questionnaire to determine the length of time taken to fill in the questionnaire. Patients took approximately 10 to 15 minutes to fill in the questionnaire.

3.4.3. Results of the pilot study

The pilot study was conducted successfully without problems. No discrepancies were observed, and participants understood the questions. The same data analysis techniques as the main study were used.

3.5. DATA ANALYSIS

Data analysis is the systematic organization and synthesis of research data.

3.5.1. Overview of data management

Plans were made beforehand to work together with the team at the clinic. Data collected was checked for errors and missing data; thereafter it was sorted according to age group, gender and marital status. The data was then entered on an excel spreadsheet (Refer annexure H). After entering the data on the computer it was checked for accuracy. A flash drive was used to store data as a backup system. During data
collection the researcher was available to solve problems (Burns and Grove, 2008:447).

Data was exported to the Stata Release 11 program for analysis. This was done by a statistician attached to the Medical Research Council. Descriptive statistics such as frequencies, means and percentages were used. Standard deviation and 95% confidence intervals were calculated.

3.6. VALIDITY AND RELIABILITY

3.6.1. Validity

Definition of validity

Validity refers to the extent to which the instrument measures what it is supposed to measure (Burns & Grove, 2008:380).

Method of ensuring validity in this study.

This study was a replication study using the same tool as that used by Apoola, et al., (2006), which was already validated. The tool was tested by Apoola, et al., (2006) on 2544 participants and was found by the researcher to be valid and reliable. The instrument met the following criteria: Burns and Grove, (2008: 380).

- Construct validity - questions were well constructed, appropriate and meaningful.
- Content validity – in this study content validity was assessed to establish whether the items in the questionnaire were relevant to the subject. The instrument was also checked if instructions were clear and language was understandable.
- Face validity – instrument appeared valid, content was clear. The fact that participants were willing to complete the questionnaire is an indication that it measures the content they agreed to provide (Burns and Grove, 2008:380-383).
3.6.2. Reliability

*Definition of reliability*

Reliability is the consistency of the measurement. It refers to the ability of the instrument to yield consistent results whenever it is used. It reflects the stability of the measurement.

*Method of ensuring reliability in this study*

This study was a replication study using the same tool as that used by Apoola, et al., (2006). The tool was tested by Apoola, et al., (2006) on 2544 participants and was found by the researchers to be valid and reliable. The researcher was the only one who administered the questionnaires thereby displaying similar personal attributes to all participants. Privacy and confidentiality were ensured. Support was given by clarifying questions when needed. Participants were aware of the time it will take to complete the questionnaire.

3.7. ETHICAL CONSIDERATIONS

The following steps regarding ethical considerations were undertaken in this study.

- The proposal was submitted to the Medical Human Research Ethics Committee (HRCE) of the University of Witwatersrand and to the Post Graduate Committee of the Faculty of Health Sciences of the University of Witwatersrand (Assessor Group) for approval and to prevent violation of human rights.

- Permission was requested from Ade Apoola to use his validated instrument. (Refer Annexure I).

- Permission to conduct research was requested and obtained from Gauteng Department of Health and the Local Authority (Refer annexure A, B, and C).
• Informed consent was obtained from participants. Participants were given full and accurate information about the investigation so that they were able to make an informed decision to participate or not (Refer annexure F). The patients were informed that the information gathered will be used to compile a research report. The research report will be made available to the Gauteng Department of Health. The researcher’s contact details were given.

• Participants were not coerced to participate in the research project. Participants had the right not to participate and the right to terminate participation at any stage without penalty.

• Avoidance of any emotional and physical harm of participants was ensured. The researcher was not required to refer any medical or other concerns as none arose.

• Privacy, anonymity and confidentiality were ensured by using numbers or codes instead of names. Participants were informed that they have the right to refuse to answer specific questions without suffering any ill effects whatsoever. Confidentiality was maintained i.e. information was not associated with a particular person. Access to information by unauthorized persons was prevented. Questionnaires were handled by the researcher and her supervisor only. Data collected was locked up safely. The relationship with the participants was kept at a professional level.

• The competency of the researcher to undertake the investigation was ensured. The researcher had successfully completed a course in research as one of the requirements for her Master of Science in Nursing.

• Findings will be communicated in the research article.
3.8. CONCLUSIONS

This was a replication of the study by Apoola, Radcliffe, Das et al., (2006) entitled “Patient preferences for partner notification of a sexually transmitted infection”. The aim of the study was to identify preferred methods of notifying a sexual contact about a diagnosed sexually transmitted infection.

The same self-administered questionnaire previously used was used in this study. The questionnaire focused on the demography of the sample, type of communication method accessible to the patient as well as the preferred methods of partner notification. Descriptive statistics were used to describe the data collected.
CHAPTER 4
RESULTS AND DISCUSSIONS

4.1. INTRODUCTION

The results of the study as well as discussions of these results are presented in chapter four. The study was conducted from the 12th August to the 22nd September 2011. The study was conducted on patients who attended a sexually transmitted infections clinic i.e. patients who had an STI problem. There were (n=162) questionnaires that were returned.

The results pertaining to each objective are presented individually:

4.2. OBJECTIVE ONE: PERCENTAGE OF PATIENTS PRESENTING TO THE CLINIC AS A RESULT OF PARTNER NOTIFICATION

Of the (n=162) participants (n=13) 8.2% reported that they were attending the clinic because they had been informed by their partner that they had been potentially exposed to an STI and required treatment. These findings indicate that very few of the patients attending STI clinic are attending as a result of partner notification. This finding is in keeping with the Gauteng Health Information Management reports of low partner treatment rate of between 20.0-21.9%.

4.3. OBJECTIVE TWO: DEMOGRAPHY OF PATIENTS ATTENDING THE STI CLINIC

4.3.1. Demography of patients attending the STI clinic

Gender and age

Eighty five (n=85) 52% males and (n=77) 48% females participated in the study. The ages of the participants ranged between 18 and 51 years. The median age for both
males and females was 30 years. The youngest participant was 18 years. The oldest male was 51 years and the oldest female participant was 47 years. Findings indicate that there is no significant difference in the numbers of females and males attending the STI clinic. Refer to figure 4.1 Description of gender distribution of STI attendees.

**Figure 4.1: Description of gender distribution of STI attendees.**

<table>
<thead>
<tr>
<th>Demographics of STI clinic attendees: Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="chart.png" alt="Gender Distribution Chart" /></td>
</tr>
<tr>
<td>Males (n=85)</td>
</tr>
<tr>
<td>Females (n=77)</td>
</tr>
</tbody>
</table>

**Marital status**

Of the 162 participants, (n=92) 56.7% were single, (n=32) 19.7% were married, and (n=38) 23.4% were cohabiting. A majority of the female participants were single (n=47) 61.04% and more of the male partners were married (n=19) 22.35% compared with married females (n=13)16.88%. Refer to figure 4.2 for a description of the marital status of the participants.
Number of sexual partners

The participants were requested to give the number of sexual partners that they had. Seven (4.32%) individuals attending the STI clinic reported that they did not have a current sexual partner. (n=124) 76.54% individuals reported that they had one sexual partner, (n=27) 16.67%, reported that they had two sexual partners, (n=3)1.85%, reported that they had three sexual partners and only (n=1) 0.62% participant reported (n=4) sexual partners. 19.1% of participants had more than one sexual partner.

Refer to Table 4.1 and table 4.3 for a description of the number of sexual partners of the participants.
Table 4.1: Description of number of sexual partners

<table>
<thead>
<tr>
<th>No sexual partners</th>
<th>(n=7) 4%</th>
</tr>
</thead>
<tbody>
<tr>
<td>One sexual partner</td>
<td>(n=124) 76%</td>
</tr>
<tr>
<td>Two sexual partners</td>
<td>(n=27) 17%</td>
</tr>
<tr>
<td>Three sexual partners</td>
<td>(n=3) 2%</td>
</tr>
<tr>
<td>Four sexual partners</td>
<td>(n=1) 0.62%</td>
</tr>
</tbody>
</table>

Figure 4.3: Description of number of sexual partners.

Table 4.2: Description of gender based on number of sexual partners.

<table>
<thead>
<tr>
<th>Gender</th>
<th>0 partner</th>
<th>1 partner</th>
<th>2 partners</th>
<th>3 partners</th>
<th>4 partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>(n=3)3.53%</td>
<td>(n=59)69.41%</td>
<td>(n=21)24.71%</td>
<td>(n=2)2.35%</td>
<td>0</td>
</tr>
<tr>
<td>Females</td>
<td>(n=4)5.19%</td>
<td>(n=65)84.42%</td>
<td>(n=6)7.79%</td>
<td>(n=1)1.30%</td>
<td>(n=1)1.30%</td>
</tr>
</tbody>
</table>
Males tended to have a greater number of sexual partners. Of the participants who reported only one partner, (n=59) 69.41% were male and (n= 65) 84.42% were female. Of the participants who reported two partners, (n=21) 24.71% were male and (n=6 )7.79% were female. Of the participants with three partners (n=8) 4.93% were males and (n=3) 1.85% were females. Of the participants who had four partners (n=1) 0.61% were female and no males. Refer Table 4.2 and Figure 4.4 and 4.5 for description of gender based number of sexual partners. More females (n=65) than males (n=59) had a single partner. A high number of males (n=24) had multiple partners than females (n=8).
4.3.2. Reasons for attending the clinic

Participants were requested to provide a reason for visiting the STI clinic. Of the 162 participants (n=111) 68.5% stated that they attended the clinic as ‘they had noticed some symptoms in the genital area’, (n=13) 8% participants attended the clinic as ‘they were told by their partner to attend the clinic’, (n=14)8.6% participants attended the clinic as they ‘had a follow up appointment at the clinic’ (n=26) 16.04% participants attended the clinic ‘for a checkup’ and had no symptoms and one participant attended the clinic for a reason not specified. Results show that the majority of patients go to the STI clinic after experiencing symptoms. More males attended the clinic for genital symptoms (62%) as compared with females (49%). Refer Table 4.3 and Figure 4.6 provides a description of the reason for attending the clinic.
Table 4.3: Reasons for coming to the clinic

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count (n)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptomatic</td>
<td>111</td>
<td>68.5%</td>
</tr>
<tr>
<td>Referred by partner</td>
<td>13</td>
<td>8%</td>
</tr>
<tr>
<td>Follow up appointment</td>
<td>14</td>
<td>8.6%</td>
</tr>
<tr>
<td>Checkup asymptomatic</td>
<td>26</td>
<td>16%</td>
</tr>
<tr>
<td>Other reasons</td>
<td>1</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

Figure 4.6: Reasons for coming to the clinic

4.3.3. Accessible communication method

The participants were requested to state whether they had access to any form of communication. Eighty (49.38%) participants had access to private postage, 149 (92%) had access to cellular telephones and (n=9) 5.5% had access to e-mail. The main accessible communication method was found to be the cellular telephone. Refer Table 4.4 and Figure 4.7 for a description of accessible communication method.
Figure 4.7: Description of accessible communication method

**Description of accessible communication method**

<table>
<thead>
<tr>
<th>Method</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private postage</td>
<td>(n=80) 49.38%</td>
</tr>
<tr>
<td>Cellular telephone</td>
<td>(n=149) 92%</td>
</tr>
<tr>
<td>Email</td>
<td>(n=9) 5.5%</td>
</tr>
</tbody>
</table>

**Table 4.6: Description of accessible communication method**

4.3.4. Previous history of STI

Participants were requested to state whether they had a previous history of a sexually transmitted infection. Of the participants (n=74) 45.68% stated that they had a previous STI and (n=88) 54.32% stated that they had never had a previous STI. (n=45) 68% of patients had previous STI episodes. Refer to Table 4.5 and Figure 4.8 for a description of previous history of STI.
Table 4.5 Description of previous history of STI

<table>
<thead>
<tr>
<th>Previous STI</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>(n=88) 54.32%</td>
</tr>
<tr>
<td>Yes</td>
<td>(n=74) 45.68%</td>
</tr>
</tbody>
</table>

Figure 4.8: Description of previous history of STI

More males (n=42) 49.41% reported having a previous STI as compared with females (n=32) 41.56%.

4.4. OBJECTIVE THREE: PREFERRED METHOD OF PARTNER NOTIFICATION

4.4.1. Patient preference for partner notification

A majority of participants (n=151) 93.21% felt that they would like to be the one to inform their partner that they have a sexually transmitted infection. The other methods that the participants felt were not good methods of informing the partner were stated as follows:
• One hundred and forty one (87.04%) of participants felt that the clinic sending a letter to the partner informing him to contact the clinic was not a good method of informing partner.

• Hundred and forty five (89.51%) felt that the clinic phoning the partner to inform them that they have an infection was not a good method.

• Hundred and forty four (88.89%) felt that the clinic sending a text message to the partner to inform them that they have an infection was not a good method.

• Hundred and forty nine (91.98%) felt that the clinic sending an email to the partner informing them that they have an infection was not a good method.

Results indicate that participants do not want to notify partners using cellular text messaging despite the fact that most patients and their partners have access to cellular telephones. Refer to Table 4.6 and Figure 4.9 for preferred method of partner notification.

Table 4.6: Description of Patient’s preference for partner notification

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
<th>Good\bad method</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Patient will tell partner</td>
<td>(n=151) 93%</td>
<td>Good method</td>
</tr>
<tr>
<td>b. Clinic will send a letter</td>
<td>(n=141) 87.04%</td>
<td>Bad method</td>
</tr>
<tr>
<td>c. Clinic will phone informing partner about STI</td>
<td>(n=145) 89.51%</td>
<td>Bad method</td>
</tr>
<tr>
<td>d. Clinic will send SMS informing partner to contact clinic</td>
<td>(n=144) 88.89%</td>
<td>Bad method</td>
</tr>
<tr>
<td>e. Clinic will send email informing them about STI</td>
<td>(n=149) 91.98%</td>
<td>Bad method</td>
</tr>
</tbody>
</table>
4.4.2. Patient preference regarding how to be notified

A majority of participants (n = 156) 96.30% felt that the best way to be informed about an STI risk is by being informed by their partner. All other methods were rated by the participants as being unacceptable as a notification method. Refer to Table 4.7 and Figure 4.10 for a description of preferred method to be notified if a partner has an STI.

**Table 4.7: Description Patient’s preference regarding how to be notified**

<table>
<thead>
<tr>
<th>Method</th>
<th>Preference (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner to contact you verbally</td>
<td>(n=156) 96%</td>
</tr>
<tr>
<td>Phone call from clinic about risk of STI</td>
<td>(n=8) 4.9%</td>
</tr>
<tr>
<td>SMS informing you to contact clinic</td>
<td>(n=15) 9.2%</td>
</tr>
<tr>
<td>SMS from clinic informing you that you may have STI</td>
<td>(n=7) 4.3%</td>
</tr>
</tbody>
</table>
4.5. DISCUSSION

4.5.1. Percentage of patients presenting to the clinic as a result of partner notification

In this study two methods of partner notification were observed i.e. partner referral and provider referral. Patient referral is the method whereby the patient notifies their partner(s) about the risk of an STI. Provider referral is when the health provider notifies the patient’s partner about the risk of an STI (Alam, et al., 2010:5).

Partner notification has the potential to control and manage STI’s if practiced correctly i.e. if each and every patient ensures that their partner attends the clinic for treatment following exposure to an STI. A person who has contact with another person with an STI may be asymptomatic and thus would not normally present at the clinic for treatment. If this person is requested to attend the clinic as they have been in contact with a person with an STI they could obtain treatment for a potentially asymptomatic infection. A minimum of 8% of participants in this study reported to the clinic as a result of partner notification. According to the study by Trelle, et al.,
(2006:1) only 40-60% of STI patients are reached through partner notification. The study by Elawad (2009:159) indicated that 50.6% attended the clinic because they have STI symptoms and not because they were referred by partners. The study revealed that the main reason why patients attend the STI clinic was because they had signs and symptoms of STI's. The second reason was for check up with no symptoms. The third reason was for follow up treatment, followed by referral by partner.

**4.5.2. Access to methods of communication**

Most respondents had access to cellular telephones i.e. 92%. Those who are able to receive letters from the post make up 49% of respondents. This may be attributed to the requirements needed for one to qualify for a post box. Street delivery of post can also be difficult in some areas. Irrespective of the fact that the majority of respondents have cellular telephones, contact by text messaging is not preferred. A study by Tomnay, Pitts and Fairley (2005:1) indicated the need to explore the role of new technology in contact tracing.

**4.5.3. Number of sexual partners in the last three months**

Numbers of sexual partners vary from no partner to four partners. 90% of patients had one partner. The study revealed that males were found to have more partners than females. The study by Johnson, Bradshow and Dorrington, (2007:3) revealed that an increased number of females were found to be more at risk of contracting an STI due to their low economic status and the fact that they are unable to negotiate for condom use. The study by Kerrigan, et al., (2008:2) indicated that there is a relationship between traditional gender roles and STI vulnerability. African-American men were found to
have multiple sexual partners and this increased the vulnerability of females to STI’s. Similarly in another study in America it was found that one quarter of youth in relationships have more than one partner, which is a factor in promoting the spread of STI’s and HIV (Johnson, Bradshaw and Dorrington, 2007:3). Sentinel surveillance of STI’s in South Africa by Johnson, Coetzee and Dorrington, (2005:1) revealed that the majority of males suffer from gonococcal urethritis and genital ulcerative disease and this correlates with the number of partners that they have.

4.5.4. Previous history of STI’s

Patients with no history of previous STI’s made up (n=88) 54% of respondents and those with a history of previous STI episodes comprised (n=74) 46%. The study by Meyer-Weitz, et al., (2006:17b) reported that 52% of patients had previous episodes of STI’s. Recurrence of STI’s seems to be a problem.

4.5.5. Preferred method of partner notification

The results demonstrated that the most preferred method of partner notification is patient referral. Patients who had a STI preferred to notify their partners themselves. An overwhelming (n=151) 93% voted for this method ;( n=156) 96% preferred their partners to do the same. The partner notification method currently in use is partner referral. The results confirmed the findings of the replicated study by Apoola, et al., (2006:328) namely that the most preferred method of partner notification is self-notification i.e. patients want to notify partners directly.

4.6. CONCLUSIONS

The most preferred method of partner notification is self-notification. Patients also want their partners to notify them directly. Most patients come to the clinic because they have STI symptoms and not because they are referred by partners. Ninety two
(92%) of patients have cellular telephones with text messaging. The possibility of using text messaging for partner notification should be explored.
CHAPTER 5
CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

5.1 INTRODUCTION
This chapter summarizes the study and its main findings. The chapter outlines the limitations and makes recommendations according to the research findings. Majority of patients preferred to notify their partners about an STI and preferred their partners to do the same. Partner notification by the provider either by sending a letter, text message or email was not preferred. The objectives of the study were achieved; very few STI patients go to the clinic as a result of partner notification. The demographics of patients attending the STI clinic were identified.

5.2 CONCLUSION
The conclusions presented according to the research objectives formulated for this study are:

• The percentage of patients presenting as a result of partner notification is only (n=13) 8%.

• It was found that slightly more males (n=85) 52% than females (n=77) 48% attend the STI clinic.

• The age of attendees ranged from 18 and 51 years. Majority of the patients were single and most participants had one partner.

• From the results of the study it became apparent that the majority of STI patients (n=156) 96% attending the STI clinic under study preferred to inform their partners themselves that they may be at risk of an STI and that the partner should receive treatment.
Furthermore, the participants in this particular study would also prefer to be informed by their partner if they were potentially at risk of contracting a sexually transmitted infection.

5.3. RECOMMENDATIONS

5.3.1. Recommendations for nursing practice

The researcher recommends that all practicing nurses continue emphasizing the culture of one sexual partner whenever they counsel STI patients. Both male and female condoms should be promoted and offered to all patients with STI’s at all times. The correct and consistent use of condoms should be emphasized.

The importance of partner notification and treatment as a major aspect of controlling and managing STI’s should be stressed. Whenever managing STI patients, the feasibility and effectiveness of the partner notification method should be explored. It is also important to look at the barriers presented by different methods of partner notification. Patients should also be given an opportunity to choose the preferred method of partner notification. Patients must also be advised that the outcome of partner notification may be influenced by issues related to sociocultural, socioeconomic and stigma factors. The aim of the health provider is to treat all STI contacts to prevent complications.

Health professionals and health authorities should discuss strategies to improve the partner treatment rate. Health providers should seek to instill a sense of responsibility in patients regarding the notification of partners as well as the treatment of STI’s.

5.3.2. Recommendations for further research

It is recommended that a follow-up study be conducted to explore why the partners of STI patients do not report to the clinic as expected. The study has indicated that
patients prefer to notify their partners. This is the method that is in practice, so why are so few patients coming as a result of partner notification? It is also recommended that the possibility of using the short message system (sms) private emails and private mails be explored for patients who have access to those methods of communication.

5.3.3. Recommendations for education

Nursing education could benefit by developing awareness programmes and including them in the nursing school curriculum. The stigma attached to STI’s makes partner notification difficult; as a result staff must be trained in new strategies to destigmatize STI’s, including HIV and AIDS. Openness to the use of new communication technology should be encouraged in individuals, families and communities. Training programmes to emphasize the importance of partner notification and treatment should be developed. Health professionals must be trained in appropriate ways to discuss issues related to sexuality and safe sexual behaviour.

5.4. LIMITATIONS

Data collection was carried out using “an already validated self-administered questionnaire.” A one-to-one interview might have produced more in-depth information regarding the choice of the preferred method of partner notification. The study was limited to the Esselen clinic only and thus findings cannot be generalized.

5.5. CONTRIBUTION OF THE STUDY

The study will benefit authorities to make an informed decision regarding the best method to be used for partner notification. Further research is indicated to establish the reasons why partners do not go to the clinic for treatment following notification.
5.5. FINAL CONCLUSION

The conclusions of patients for patient’s preferences for partner notification are as follows:

- The method of STI patients telling the partner themselves was a good method (n=151) 93% and also partner doing the same was a good thing (n=156) 96%.
- The other methods were not preferred.

The aim and objectives of the study were achieved. The method of conducting research was scientific as well as rigorous and ethical. The research findings will be published in a journal article.
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Caribbean and white British women in the UK. 1p.

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ANNEXURES
ANNEXURE A

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Ms Marubini Patricia Nevhutalu

CLEARANCE CERTIFICATE

PROJECT

M110113
Patient References for Partner Notification of Sexually Transmitted Infections

INVESTIGATORS

Ms Marubini Patricia Nevhutalu.

DEPARTMENT

Department of Nursing Education

DATE CONSIDERED

28/01/2011

DECISION OF THE COMMITTEE*

Approved unconditionally

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE

24/03/2011

CHAIRPERSON

(Professor PE Cleaton-Jones)

*Guidelines for written ‘informed consent’ attached where applicable

cc: Supervisor: Dr Candice Harris

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and ONE COPY returned to the Secretary at Room 10004, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. I agree to a completion of a yearly progress report.

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES...
Dear Mrs Lewis

Master of Science in Nursing: Approval of Title

We have pleasure in advising that your proposal entitled “Patient preferences for partner notification of sexually transmitted infections” has been approved. Please note that any amendments to this title have to be endorsed by the Faculty’s higher degrees committee and formally approved.

Yours sincerely

Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences
2 August 2011

Dear Ms Patricia Nevhutalu

APPROVAL TO CONDUCT RESEARCH WITHIN HEALTH IN THE CITY OF JOHANNESBURG

Permission has been granted to you to conduct research in the Health Department within the City of Johannesburg.

Topic: Patient Preferences for Partner Notification of Sexually Transmitted Infections

Please contact the following person(s) before you commence with your project and to gain access to the clinics:

Regional Health Manager: Region F: Mr. Oupa Montsioa
Tel. No.: 011 681 8130/082 467 9423

Should you have any queries please do not hesitate to contact our department.

We look forward to your Final Research Report.

Thank you,

[Signature]

DR. R. BISMILLA
Executive Director
City of Johannesburg
Health Department
ANNEXURE D

Patient preferences for partner notification

Data collection form

1. Study ID

2. Date completed

Q

3. Age (in years)

4. Sex

Female

Male

5. Marital status

Co-habiting

Single

Married

Other

Write in

8. What is your reason for visiting the clinic today

a. You have noticed some symptoms in the genital region
b. You were told to come in by a partner
c. You had a follow-up appointment in the clinic
d. You are here just for a check-up. No symptoms

9. Do you have access to any of the following at present

a. Being able to receive letters privately
b. Mobile telephone with text messaging
c. Private email

10. How many sexual partners have you had in the previous 3 months

Replication study done in the United Kingdom. Permission to utilize questionnaire granted by email on 23 June 2010.
11. Have you ever had any of the following sexually transmitted infections
   Gonorrhea, Syphilis, Genital Herpes, Chlamydia, Non Specific
   Urethritis (NSU), Trichomonas, Genital warts
   
   Yes  No  Tick one
   1  0

12. Please rate the following methods of contacting your sexual contact if you are found to have a sexually transmitted infection, where 1 means this is not a good method and 5 means you think this is a very good method. 0 indicates that don’t know or are undecided

<table>
<thead>
<tr>
<th>Method</th>
<th>Not a good method</th>
<th>Very good method</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>a You will be the one to tell your partners that they may have an infection.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b The clinic will send a letter to your partners to tell them they may have an infection.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c The clinic will phone your partners to tell them they may have an infection.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d The clinic will send a text message to your partners to tell them they may have an infection.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e The clinic will send an email to your partners to tell them they may have an infection</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. Please rate the following methods of contacting you if your sexual contact is found to have a sexually transmitted infection, where 1 means this is not a good method and 5 means you think this is a very good method. 0 indicates that don’t know or are undecided

<table>
<thead>
<tr>
<th>Method</th>
<th>Not a good method</th>
<th>Very good method</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Being informed by your partner (verbally/text/letter etc) that you may have a sexually transmitted infection.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b Receiving a phone call from the clinic informing you that you may have a sexually transmitted infection.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c Receiving a text message on your mobile phone informing you to contact the clinic.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d Receiving a text message on your mobile phone informing you that you may have a sexually transmitted infection.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e Receiving an email informing you that you may have a sexually transmitted infection.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f Receiving an email informing you to contact the clinic.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g Receiving a letter from the clinic informing you to contact the clinic.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h Receiving a letter from the clinic informing you that you may have a sexually transmitted infection.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dear Prospective Participant

My name is Marubini Patricia Nevhutalu, I am a Nurse Educator at Chris Hani Baragwanath Nursing College. I am currently studying for a Masters Degree in Community Nursing at the Faculty of Health Sciences University of Witwatersrand. I am required to undertake a research study under the guidance of an experienced researcher.

May I invite you to consider participating in a study on Patient Preferences for Partner Notification of Sexually Transmitted Infections? Your participation is entirely voluntary and there are no risks involved. Withdrawal from the study is allowed at any stage without penalty.

Your identity and your response will remain anonymous throughout the study. Numbers or codes will be used instead of your name. Your responses will be kept confidential but will only be accessible to me and my supervisor. Data collected will be kept under lock and key.
A quantitative descriptive survey will be conducted. Participants will be given a self administered questionnaire to fill in. The researcher will be there all the time to clarify issues of concern. You may decline to answer any questions if you feel uncomfortable. Should you agree to participate in this study you will be requested to please sign the consent form attached.

For more information please feel free to contact me at 082 267 1377 or 011 983 3044 or my Supervisor at 011 488 4272

Thank you for taking the time to read this letter.

Yours sincerely,

Patricia Nevhutalu.
Dear Prospective participant

My name is Marubini Patricia Nevhutalu. I am a Nurse Educator at Chris Hani Baragwanath Nursing College. I am currently studying for a Masters Degree in Nursing at the University of Witwatersrand, Faculty of Health Sciences. As part of my studies I am required to complete a research project.

I hereby invite you to participate in this study on Patient’s Preference for Partner Notification of Sexually Transmitted infections. Participation is entirely voluntary and no risks are involved. Refusal to participate or withdrawal is assured without any penalty.

A quantitative, descriptive survey will be conducted. A self administered questionnaire will be used to collect information. It will take 10 – 15 minutes to complete the questionnaire. Information given will remain confidential and anonymity will be ensured. Information will only be accessible to the researcher and the supervisor.

For more information please contact me at 082 267 1377 or 011 983 3044 or my Supervisor at 011 488 4272

The Human Research Ethics Committee of the University and Gauteng Department of Health approved the study and its procedures. The above points were discussed with the participants and in my opinion; the participant understands the risks, benefits and obligations involved in participating in this study.
I understand that my participation is voluntary and that I may refuse to participate, or withdraw my consent and stop taking part at any time without penalty.

I hereby freely consent to take part in this study project.

Signature of witness  Signature of subject  Date

Yours sincerely

Patricia Nevhutalu
ANNEXURE G

Partner Notification Slip

<table>
<thead>
<tr>
<th>Date:</th>
<th>File No:</th>
</tr>
</thead>
</table>

Clinic:
*Please go to the nearest clinic as soon as possible and take this letter with you.
*Uyacelwa ukuba uye emtholampilo ngokuphuthuma uphathe lencwadi.
*Okopuwa ho ya kliniking ka pele, o tshware lenolo lena.
*U komberiwa kuya e klinik na papilla le ri hi ku hatlisa.
*Vha humbelwa uri vhaye kliniki ya tsini na heli bambiri nga u tavhanya.

**DIAGNOSIS CODE**

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<th>GUS</th>
<th>GW</th>
<th>VDS</th>
<th>LGV</th>
<th>PL</th>
<th>LAP</th>
<th>BAL</th>
<th>MC</th>
<th>RPR</th>
</tr>
</thead>
</table>

NB: Please supply the appropriate syndromic\management

..............................
Clinic Nurse/Doctor

Clinic Received: ......................

Date Received: ......................
<table>
<thead>
<tr>
<th>No</th>
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<th>Sex</th>
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<th>Right Hand</th>
<th>Eye Color</th>
<th>Hair Color</th>
<th>Foot Size</th>
<th>Dress Size</th>
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</thead>
<tbody>
<tr>
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<td>1</td>
<td>M</td>
<td>A</td>
<td>1</td>
<td>1</td>
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</tbody>
</table>

Note: The table continues with more rows, but the snippet is truncated for brevity.
ANNEXURE I

Nevhutalu, Marubini (GPHEALTH)

From: Ade Apoola [apoola@yahoo.com]
Sent: Thursday, September 02, 2010 1:55 PM
To: Nevhutalu, Marubini (GPHEALTH)
Subject: Re: Research proposal

Hi Pat,
Remind me - which study are we talking about?
Ade

From: "Nevhutalu, Marubini (GPHEALTH)" <Marubini.Nevhutalu@gauteng.gov.za>
To: Ade Apoola <apoola@yahoo.com>
Sent: Thu, September 2, 2010 10:50:32 AM
Subject: FW: Research proposal

Dear Ade Apoola

Good day. As a beginner I am still busy with my proposal but my supervisor is happy so far. May you please send me information on how you ensured validity and reliability on your study. Your information is highly appreciated.

Hoping to hear from you.

Regards
Pat Nevhutalu

Disclaimer:

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Dear Pat,

Apologies.
I hereby confirm that I have given you permission to use my validated questionnaire.

Regards.
Ade Apoola

Sent from my iPhone

On 25 May 2012, at 11:57, "Nevhutalu, Marubini (GPHEALTH)" <Marubini.Nevhutalu@gauteng.gov.za> wrote:

Dear Ade Apoola,

Good day. I communicated with you long time ago between August and September 2010. I have done a study on “patient preferences for partner notification” using your instrument. I requested to use the instrument. You responded by just sending the instrument. Could you kindly send an email just stating that you are giving me permission to use your validated instrument.

My research was corrected, I need to send this outstanding permission letter to use your validated Instrument.

Your cooperation will be highly appreciated.

Regards
Pat Nevhutalu.

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