

**A STUDY OF FACTORS THAT INFLUENCE THE UTILIZATION  
OF SERVICES FOR THE MANAGEMENT OF SEXUALLY  
TRANSMITTED INFECTIONS IN NAIROBI CITY COUNCIL  
CLINICS**

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and Epidemiology Degree of Kenyatta University

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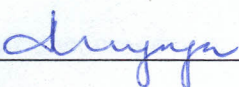
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## DECLARATION

This thesis is my original work and has not been presented in any other university or any other award.

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## Supervisor's Approval:

I confirm that the work reported in this thesis was carried out by the candidate under my supervision.

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## ***DEDICATION***

This thesis is dedicated to my family Wambui, Giita, Wanjiru and Wangari and Kanyuga for their encouragement and understanding throughout the course.

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## LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
HCF	Health care facility
HCP	Health care provider
HIV	Human Immunodeficiency Virus
STD	Sexually transmitted disease
STI	Sexually transmitted infection
UNAIDS	Joint United Nations program on HIV/AIDS
WHO	World Health Organization

## ABSTRACT

Effective control of sexually transmitted infections (STI) requires among others, that clients must seek care promptly and follow instructions provided by health care providers. Prompt and effective treatment of STI has been found to reduce the incidence of Human Immunodeficiency Syndrome (HIV) infection by 40%. In many developing countries however, many of the people affected by STI are reluctant to seek health care in public facilities. A cross-sectional study was carried out to establish how health seeking behaviour, quality of case management and organization of health facilities affect the utilization of services for STI in Nairobi. Two hundred and fifty one subjects who sought care for STI were recruited from four health facilities managed by the Nairobi City Council. Ten health workers caring for people with STI were also interviewed.

The results revealed that 65% of clients were females. Twenty three percent of the clients experienced symptoms for three to five weeks or more before seeking care and it took males longer than females to seek care for STI ( $\chi^2=23.312$ ,  $df=4$ ,  $p=0.00011$ ). Clients visiting for the first time were 43% and among this group, females were 34.7% ( $\chi^2=39.054$ ,  $df=3$ ,  $p=0.000$ ). Quality of care in general was valued as good by 69% of the clients and 84% of them were willing to continue using the same health facility. Adequate information was provided to 63% of the clients with 53% being told how to prevent infections, and only 31% being counselled on HIV infection as a possible risk for STI. Although 84% of the clients reported their intentions to ask their partners to seek care, partner referral was evident in only 13.5% of them.

Clients expressed satisfaction with services provided, but their health seeking habits were not in harmony with these feelings. There is need for intensified educational campaigns to raise awareness about the advantages of seeking treatment early for those infected and their partners in public facilities.

## CHAPTER 1. INTRODUCTION AND LITERATURE REVIEW

### 1.1: Introduction

Sexually transmitted infections (STI) are infections that spread from one person to another through sexual contact. They are a major public health problem all over the world. The World Health Organization (WHO) estimates that worldwide, there are about 330 million new infections annually, out of which 65 million (20%) occur in sub-Saharan Africa (UNAIDS, 1996). It is also estimated that Africa has the highest prevalence of the four major curable sexually transmitted diseases these are gonorrhoea, syphilis, chlamydia and trichomoniasis. In Kenya and Sub-Saharan Africa in general, sexually transmitted infections are among the top five diseases for which patients seek care at outpatient health facilities (Republic of Kenya, 1999; Laga and Lamptey 1996). The greatest risk of infection is among the sexually active groups and infants born to infected mothers. The consequences of these diseases are severe, especially in mothers and children. In women, they cause pelvic inflammatory disease, which may lead to ectopic pregnancy and death (Field and Dallabetta, 1997). They are a leading cause of infertility in women and men in developing countries. Other complications include stillbirths, perinatal deaths and retarded growth and development in children. Lack of adequate resources has led many of these developing countries to ignore this preventable health problem (WHO, 1997).

A new concern has been expressed over the problem of sexually transmitted diseases in the face of the human immunodeficiency virus (HIV) epidemic, as the two are closely related in terms of transmission. Sexually transmitted infections act as co-factors in the transmission of HIV infection. Studies have shown that effective management of STI can bring down HIV infection rates by 40% (Grosskurth *et al.*, 1995). In view of this, the emergence and spread

of HIV infection has made the prevention and management of STI more important and urgent.

The control of sexually transmitted infections consists of two main issues. The first issue deals with preventing as many infections as possible through behaviour modification. The second is concerned with keeping the duration of infection as short as possible through optimal case management (Laga, 1994).

All over the world, the management of STI has been faced with serious problems due to lack of resources such as equipment and materials especially in developing countries (Laga, 1994). For people infected with sexually transmitted infections to seek care they must accept the services provided and be motivated enough to use them. However, studies have shown that often clinicians are not sensitive to clients' problems (Moss *et al.*, 1999). As a result, many people with sexually transmitted diseases tend to seek care late or avoid going to public health facilities due to problems related to poor staff attitudes and lack of privacy. The diseases therefore continue to spread while at the same time they become difficult to treat. A number of approaches have been introduced in developing countries including Kenya, in an effort to improve the delivery of STI services, such as their integration and the use of syndromic case management. These approaches have been put in place in clinics under the Nairobi City Council since mid-1990s in an effort to provide better STI services. A study carried out in Nairobi sought to find out whether there are differences in the quality of care provided between public, private and non-governmental health services. Results showed that public care facilities offered better care than the other two (O'Hara *et al.*, 2000). Good quality care has an influence on the rate of utilization. This study aimed at determining how people with STI use the services and how they perceive their quality.

## 1.2: Literature review

### 1.2.1: Prevalence of sexually transmitted infections

Sexually transmitted infections have been recognized as a major health problem on their own right by virtue of their frequency of occurrence and their potential morbidity. The World Health Organization has estimated that there were 330 million new infections annually of syphilis, gonorrhoea, chlamydia and trichomoniasis in adults aged 15-49 years (WHO, 1997; Hayes *et al.*, 2001). STI continue to pose a threat to the health and welfare of individuals and communities. The largest numbers of these infections occur in developing countries, with sub-Saharan Africa taking up 20% of the cases (UNAIDS, 1996).

The incidence of curable STI is 254/1000 in sub-Saharan Africa, 160/1000 in South East Asia, 91/1000 in North America and 77/1000 Western Europe (WHO, 1997). In Africa the reported prevalence of syphilis ranges from 3.6% to 19%. However, syphilis seroprevalence among pregnant women has decreased significantly in recent years (Fonck *et al.*, 2001). STI prevalence (self-reported) in Kenya was 2% in women and 5% in men (KDHS, 1998). The reasons for high STI prevalence in the developing world include high rates of self-treatment, especially among men. In such cases people buy only what they can afford. Incomplete and ineffective therapy may relieve some of the symptoms but leaves infections partially treated. Other reasons include poor infrastructure, so that diseases are not treated effectively, and increased resistance to previously used antibiotics (Henry, 1995). Social factors that influence STD prevalence include mobility, urbanization and poverty (Cohen and Trussel, 1996).

Most sexually transmitted diseases are curable except for those caused by viruses such as HIV and herpes simplex among others. The principal tools for STI control and prevention used in public health settings are diagnosis, treatment, partner notification and surveillance

of disease patterns (WHO, 1997). Primary prevention strategies involve the prevention of the occurrence of new infections. They are preferable but difficult to achieve. Such measures include the use of barriers such as condoms and abstaining from sexual intercourse where possible. Secondary preventive strategies aim at improving the management of STI in order to reduce their transmission and subsequent morbidity (Devanter, 1999; Garbase *et al.*, 1998).

An important aspect in STI control requires that those affected and their partners present themselves for treatment to clinicians. In developing countries there are many reasons that prevent people with STI from seeking care early and thus obtaining early and effective treatment. Such problems include lack of awareness about the seriousness of the disease, poor recognition of the disease and seeking care from traditional healers who often do not treat the disease effectively (Oxaal and Baden, 1996; Over and Piot, 1992). Many STI such as chlamydia and gonorrhoea are asymptomatic in women, making it difficult for them to get treated early (Dehne *et al.*, 2000). Screening for syphilis in the country is a routine activity for pregnant women attending Maternal and Child Health services and those found with infection can be treated effectively.

### **1.2.2: Utilization of STI services**

Utilization has quantitative, spatial and temporal aspects. The quantitative aspect deals with rates of visits or contacts to the health care facility per year by a client, while the spatial aspect looks at the type and location of the health care facility used. The temporal aspect of utilization refers to the time at which a client seeks care after the onset of symptoms. Thus good utilization of STI services can be said to occur when patients seek care soon after the

onset of symptoms (Atawell and Grosskurth, 1999). Factors that may affect the use of STI services are largely related to the way they are provided (Kroeger, 1983).

#### **1.2.2.1: Quality of STI care**

Quality of health care is a difficult term to define. It can be defined from the provider or patient's point of view but more often from the latter. Many providers believe that clients' views have validity even if they conflict with professional judgement (Makoul *et al.*, 1995).

Quality of care is a multidimensional concept. Some of the dimensions include skills of health care providers, sufficient staff, affordability and acceptability of services, interpersonal relations (communication), and privacy during consultation, availability of services and availability of essential supplies such as drugs (Atawell and Grosskurth, 1999).

A study done in Kenya found that the quality of information provided to clients seeking STD care was good in public health facilities compared to that in private health facilities (O'Hara *et al.*, 2000).

This research will mainly focus on factors relating to the syndromic case management such as the performance of physical examination, education of the client about the disease and information about partner notification. It will also look at organizational aspects such as waiting time at the health facility and the affordability of services

#### **1.2.2.2: Syndromic Case Management**

The syndromic case management of STI was adopted as a service delivery strategy that would help to solve some of the problems faced by countries with limited resources. It was introduced in Kenya in the early nineties. It offers immediate and simplified diagnosis and treatment of STI so that diseases can be effectively treated at the first point of contact with the patient, the health centre. It reduces the need for time consuming and expensive

laboratory tests (Dadian, 1996). Using the syndromic approach in the health centres makes STI services more accessible thus encouraging more people to make use of the services. A large proportion of the standard WHO syndromic approach-training package is dedicated to the improvement of service providers' communication skills rather than clinical skills (WHO, 1991; Dehne *et al.*, 2000). Educating the client about medications, risk reduction measures, and treatment of partners form an important part of the management (Dadian, 1996). This ensures that a client is equipped with relevant information that will enable him to protect himself or herself from such infections thereafter, to recognize disease once infected, and to seek appropriate care promptly. Donovan and Blake (1992) concluded that patients crave for more information about their diseases and treatments. This information enables them to make informed decisions.

Other aspects of the case management approach include taking proper history regarding the disease and sexual behaviour, performing physical examination, educating the client about the need for the partner to get treated (partner notification) and education about how to take drugs prescribed. It is expected that clinicians caring for STI clients should exhibit good interpersonal skills after training. In a study done in Zambia, Faxelid *et al.*, (1997) reported that clinical officers with special STD training performed better than others, but still informed only 20% of the patients about the diseases. In the study the specific aspects considered include physical examination, education about the disease, education about how to take drugs and partner notification

### 1.2.2.3: Organizational factors

The organization of services includes the staffing patterns and whether or not clients are assured of anonymity within the health care settings and how long it takes clients to be attended to. It also includes aspects of service delivery such as the use or not of the syndromic case management method in the management of STI.

Heavy workloads due to shortage of staff may not allow health workers adequate time to examine patients. In such cases treatment is often based on symptoms reported by patients. In addition, the patient may not be given enough time to report all his/her problems. In situations such as these, even the provision of basic information about the problem may be lacking or inadequate (WHO, 1991; Hanson *et al.*, 1997). In many communities in Kenya, STI are stigmatized so that those seeking care fear being recognized as having STI. Offering STI services in designated or labelled rooms or clinics may discourage clients from seeking services at those clinics. Integration of STI services with other services may encourage attendance of STI clients to the clinic (Moss *et al.*, 1999). In a study done to find out how the community assessed an integrated health care system, Plescia *et al.*, (2001) reported that 33% of respondents cited lack of money as an important barrier to the use of health services.

Other factors that are related to service delivery that may discourage the use of STI services are inappropriate actions taken by health workers such as delays in referring patients, and delays in diagnosis and treatment (Ayeni *et al.*, 1987). Poor staff attitudes towards clients such as rudeness, and impatience have been reported as major barriers to the use of public health care services (Ngugi *et al.*, 1993; Allen *et al.*, 1996). Other factors are incompetent health providers where the client loses confidence in the health workers and the services in general (Attawell and Grosskurth, 1999).

#### 1.2.2.4: Health seeking behaviour

Clients may not know that the infections they suffer from are serious. Conditions such as STI continue to be so common in the communities, and people may have suffered the symptoms for so long that they no longer recognize them as problems needing medical care (Moss *et al.*, 1999). Lack of symptoms especially in women, and the reluctance to discuss sexual matters may hinder efforts to seek care (Komolafe *et al.*, 2000; WHO, 1997).

A study conducted by Benjarattanaporn *et al.*, (1997) to find out the determinants of treatment seeking behaviour associated with STD found out that 142 out of 213 men had had a prior STD and that 19% of those who attended a government clinic sought multiple treatments for prior STD because of an incomplete course of treatment. Nuwaha (2000) reported that 38% of patients who had an STI had a recurrent STI. He also found out that majority of patients had symptoms for more than two weeks before coming to the clinic.

Clients usually have a low opinion of public health services and the health workers and prefer alternative health care (Byrum *et al.*, 1998; Allen *et al.*, 1996). Evans and Lambert, (1997) found out that clients thought that clinicians in private health facilities were more likely to treat effectively than those in public facilities because they spent more time on individual patients. A study done in Kenya found that 25% of STI clients used other health facilities, including traditional healers and drug peddlers. For a number of such cases the treatment from such sources was inappropriate (Moses *et al.*, 1994). This could be due to the fact that some of the private care providers may not be well qualified and may therefore provide sub-standard care. Also, the cost of treatment may be beyond the client's purchasing power, and this may force the client to buy an incomplete course of treatment.

### 1.3: JUSTIFICATION

There is a lot that is known about STI such as their microbiology, prevention and control. In spite of this knowledge, the control of STI has remained a big problem especially in developing countries including Kenya. This is demonstrated by the high prevalence of STI among pregnant mothers attending ante natal clinics in Nairobi such as 17% for chlamydia, 3% for syphilis and 2% for gonorrhoea and 15% for HIV infection (O'Hara *et al.*, 2000). Some of the major factors include the problem of self-treatment and seeking care in expensive private facilities mainly because of poor perception of the quality of STI care in public health facilities (Laga, 1994). This is cause for concern because some of the care providers in the private sector may not be qualified enough to provide effective management or the treatment provided may be inadequate due to costs involved. Further, a study done to determine the quality of case management in different types of health care facilities found that public health care facilities offer better STI care than other types. This study aimed at finding out the factors that enhanced their seeking care at public health facilities and those that discouraged them. Clients seeking STI care provided the information. Better understanding of the factors may be used to develop more effective intervention programs for the management of STI, which may in turn improve the use of STI services. Improved utilization of STI services may reduce the prevalence of STI and that of HIV infection (Grosskurth *et al.*, 1995; Mertens *et al.*, 1997).

## **1.4 : HYPOTHESIS**

Poor organization and quality of STI care in the public health sector discourages the utilization of STI services in Nairobi.

## **1.5: OBJECTIVES**

### **1.5.1: Main Objective**

To determine factors that influence the utilization of STI services in Nairobi City Council Clinics.

### **1.5.2: Specific Objectives**

1. To determine the general characteristics of people seeking care for STI.
2. To determine the health seeking behaviour of clients seeking STI care
3. To determine the quality of case management provided to clients
4. To identify organizational factors that hinder or enhance utilization of STI services

## **CHAPTER 2: MATERIALS AND METHODS**

### **2.1: Study Area**

The study was conducted in the city of Nairobi. According to the 1999 census, the City has a population of about 2.1 million people. The population of persons aged 15-49 years is about 1.3 million and the distribution is shown in Figure 1 (Republic of Kenya, 2001). The Nairobi City Council provides most of the public health services including those for sexually transmitted diseases in the city. Most of the services are offered in about fifty health centers and dispensaries. Twelve of these health centers were upgraded (strengthened) in regard to STI services by training health care providers in the management of STI using the syndromic approach. They act as referral centers for STI from all the other health centers and dispensaries around Nairobi.

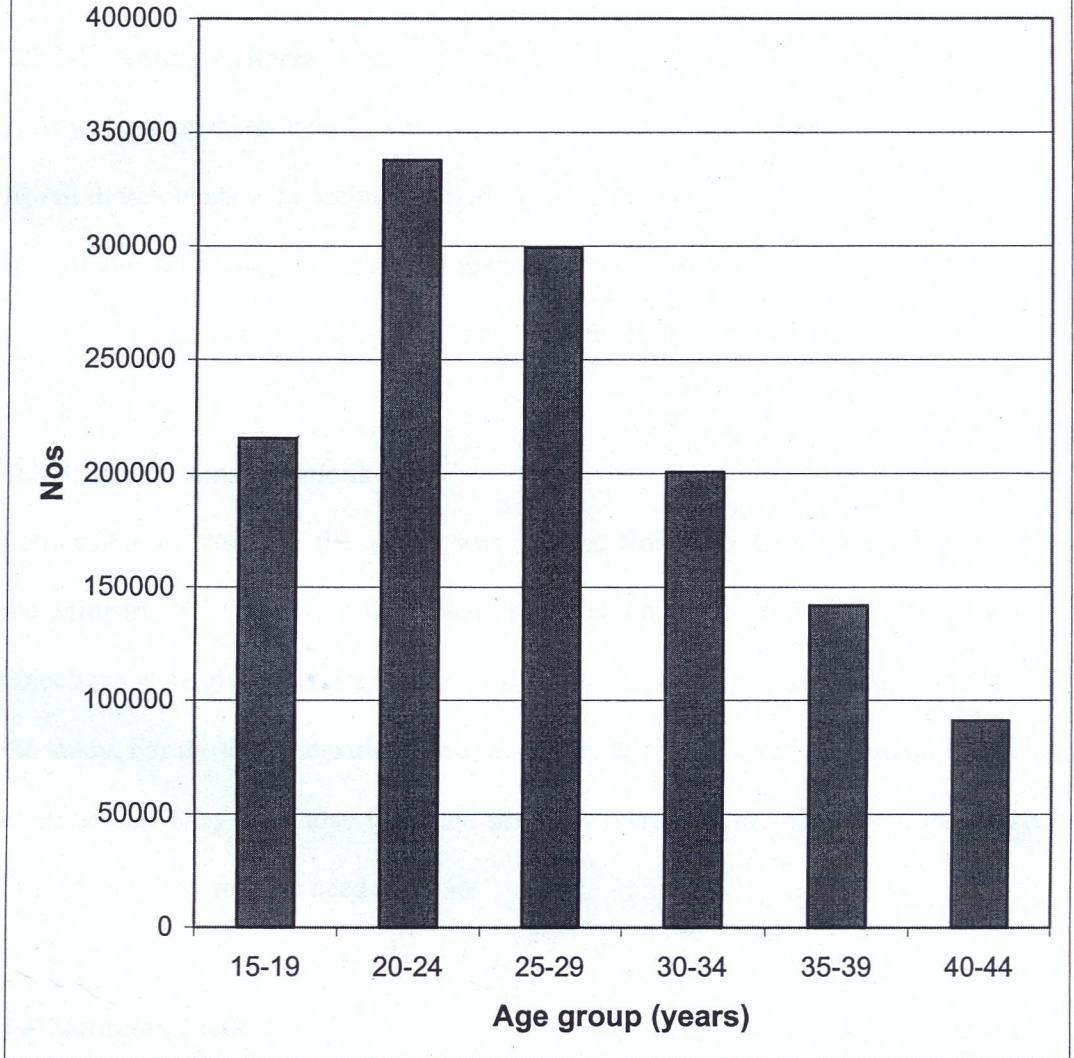
### **2.2: Study Design**

The study was a descriptive cross sectional study

### **2.3: Study Population and Ethical considerations**

The subjects consisted of clients seeking STI services in selected health centres and clinicians dealing with STI clients in those health facilities.

**Figure 1. Population distribution in Nairobi (Ministry of Finance and Planning, 2001)**



### **2.3.1:Inclusion Criteria**

All clients aged above 15 years seeking STI services who consented to take part in the study were recruited i.e. new cases, those coming back for review (follow up) and their contacts.

All clinicians currently deployed to provide STI care in the City Council clinics.

### **2.3.2:Exclusion Criteria**

- i) Any client aged less than 15 years
- ii) All those clients who declined to participate in the study.
- iii) All clients seeking services other than those related to STI
- iv) All clinicians not providing STI services at the time of the study.

### **2.3.3:Ethical considerations**

Permission to conduct the study was sought from the City Council authorities and the Ministry of Education. Clients were recruited on a voluntary basis. Those who had no objections were given a consent form to sign after explanations were provided to them about the study. For those participating it was explained to them that all information would be kept confidential. They were also informed that they were free to withdraw from the study any time should they feel the need to do so.

### **2.4:Sampling Method**

The Nairobi City Council has twelve health care facilities strengthened for STI services. A list of the health centers was made and four of them were selected at random. Strengthened clinics are clinics where health care providers were trained in syndromic management in the mid-nineties. All clients seeking STI services on a given day were interviewed on consecutive days in Langata, Dandora and Jericho health centres until the total number of

clients required per clinic was obtained. At the Special Treatment Centre every other client was interviewed. All clinicians offering STI services in each health centre were included in the study.

## 2.5: Sample Size

The minimum sample size of clients was determined using the following formula:

$$N = \frac{Z^2 PQD}{d^2} \quad (\text{Fishers } et \text{ al., 1998})$$

Where, N = sample size

Z = standard normal deviate (1.96) and corresponds to the 95% confidence Level

P = proportion of target population estimated to have a particular characteristic. Using the 1999 prevalence of 17% for chlamydia, the proportion used for the study will be 0.03 (Fonck *et al.*, 2001)

$$Q = (1 - 0.03) = 0.97$$

$$D = 1$$

$$d = (0.05)^2 = \frac{3.84 \times 0.17 \times 0.83}{(0.05)^2} = 216$$

The minimum number of the study subjects will be 250.

## 2.6: Data collection

Exit interviews were conducted to obtain information from the clients about the availability of drugs, length of time taken to be treated, their perception on the quality of care provided and how these issues may affect future use of available STI services.

Interviews were conducted for clinicians to validate information provided by clients.

Pre-testing of the tool was carried out in two of the health facilities that were not used in the study. Review of the study tools was done as necessary.

Quality of case management was determined by looking at the following three aspects of care i.e. physical examination, client education and information provided on the need for the partner of the client to be treated (partner notification). For physical examination, care on this aspect was found to be good if a client's private parts were at least inspected by the health care provider, while education was said to be good if a client reported being provided with information on four aspects, fair for three and poor for two or less. Information about the need for the client's partner to be treated also was good if the client was told about it.

## **2.7:Data management**

Data was analysed using the Statistical Package for Social Sciences (SPSS). Cross tabulation was done to determine any relationships between variables. To test for significant differences between sub-groups, the Chi-square test was used for independent variables such as educational level and marital status. Data was presented using frequency distributions in form of graphs.

## CHAPTER 3: RESULTS

### 3.1: General characteristics of the study population

The subjects sampled for the study were two hundred and fifty one. The general characteristics of the clients that were considered in this study were age, sex, educational status, marital status, occupation and the type of conditions.

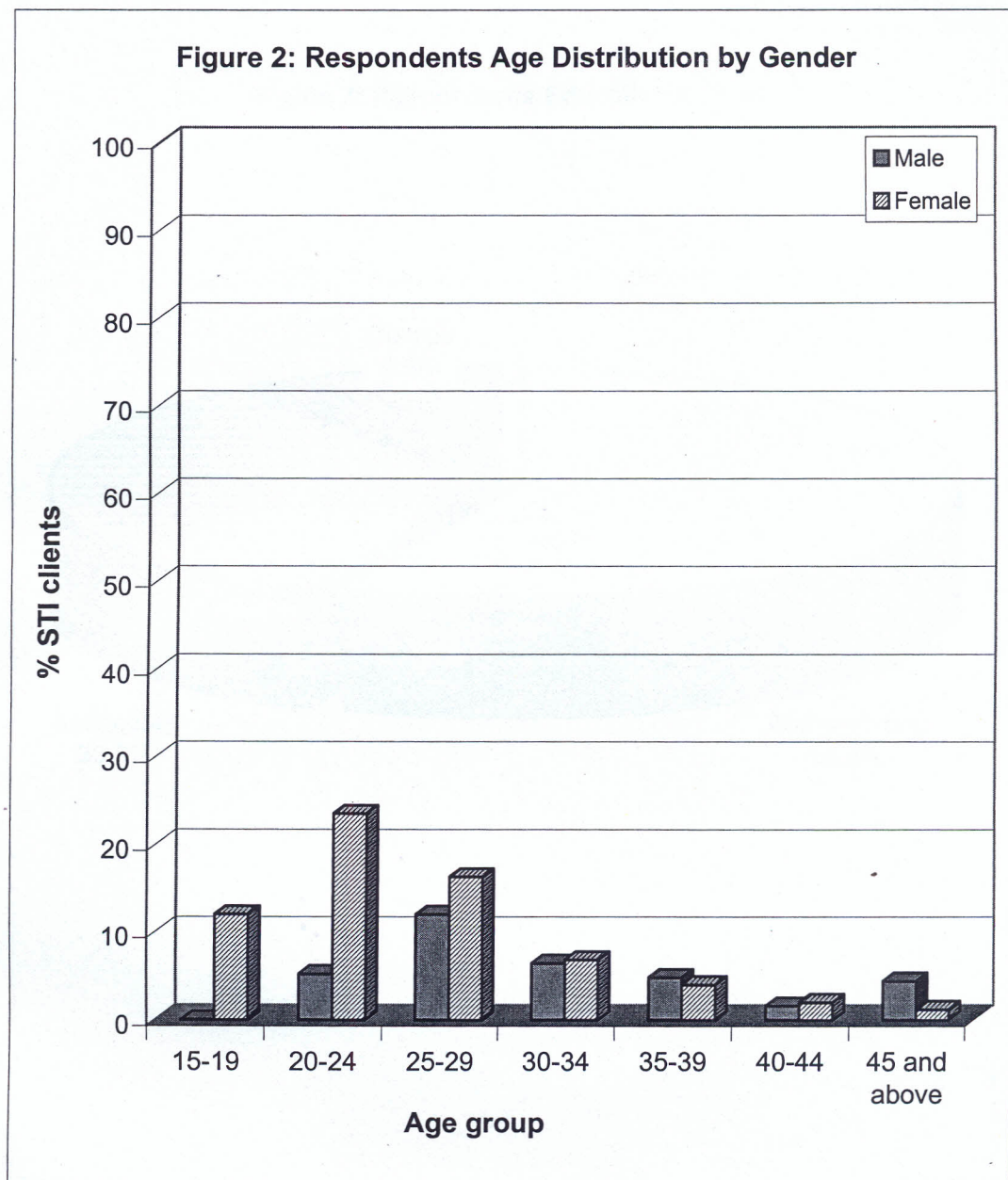
#### 3.1.1: Age and gender distribution of STI clients

The mean age in years was  $27.8 \pm 8.5$  and the range was 16-54. Majority of the clients seeking STI services were in the age groups 20-24 (28.7%) and 25-29 (28.3%) years. Few clients were seen in the older age groups for example the 40-44 age group made up only 3.6% of the respondents and the age group 45 years and above took up 5.6%.

Sixty five percent of the clients were females and 35% were males. Females were 35.8% and 24.8% in the 20-24 and 25-29 age brackets, respectively. For males, 28.7% and 18.6% were found in the 25-29 and 30-34 age brackets, respectively. There were no male clients in the 15-19 years age bracket (Figure 2). Females were more likely to be found in the younger age groups than males ( $\chi^2=45.645$ ,  $df=6$ ,  $p=0.000$ )

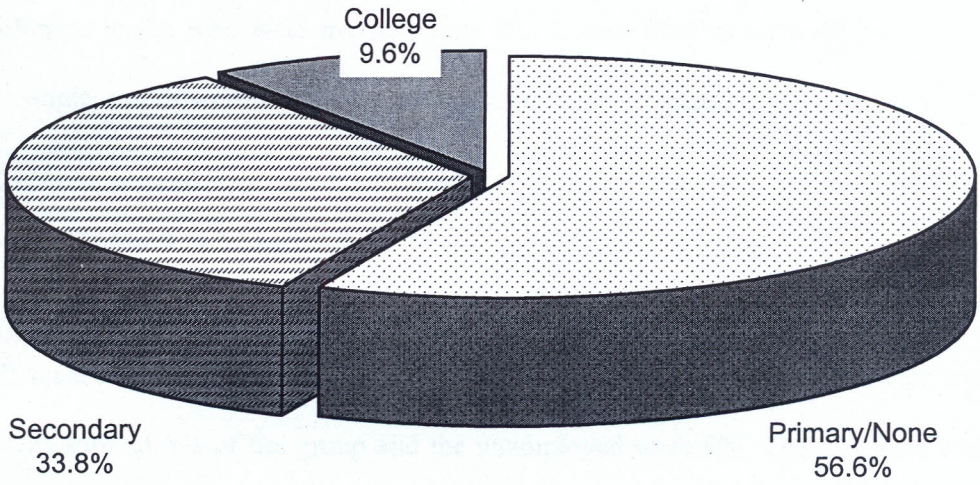
#### 3.1.2: Educational level and marital status of STI clients

In this study, the level of education was classified into three groups. Clients who had attended primary school and those who had never been to school were considered to have low level, those with secondary education were said to have moderate and those with college education and higher were highly educated. Majority (56.6%) of the respondents had attained primary level education, followed by those with secondary education (33.8%). Those with college education were 9.6% (Figure 3).

**Figure 2: Respondents Age Distribution by Gender**

$\chi^2=45.645, p<0.000$

Figure 3: Respondents Educational Level



When educational level was compared to gender, the difference was statistically significant ( $\chi^2=25.078$ ,  $df=2$ ,  $p=0.000$ ). Males were more likely to have higher educational levels than females.

Sixty three percent of the subjects were married and 34% of them were single. Out of the total population, males who were married were 20.3% and females were 42.2%. Of those who were single, males were 12% and females were 21.5% (Figure 4).

### **3.1.3:Occupation of STI clients**

The subjects were involved in various occupational activities. About 27% were involved in small-scale business, for instance, selling second hand clothes, while 23.5% were housewives. Students formed 5% of the group and the unemployed were 9%. The rest were employed in various capacities such as drivers, clerks, teachers and musicians (Figure 5).

Figure 4: Gender by Marital Status

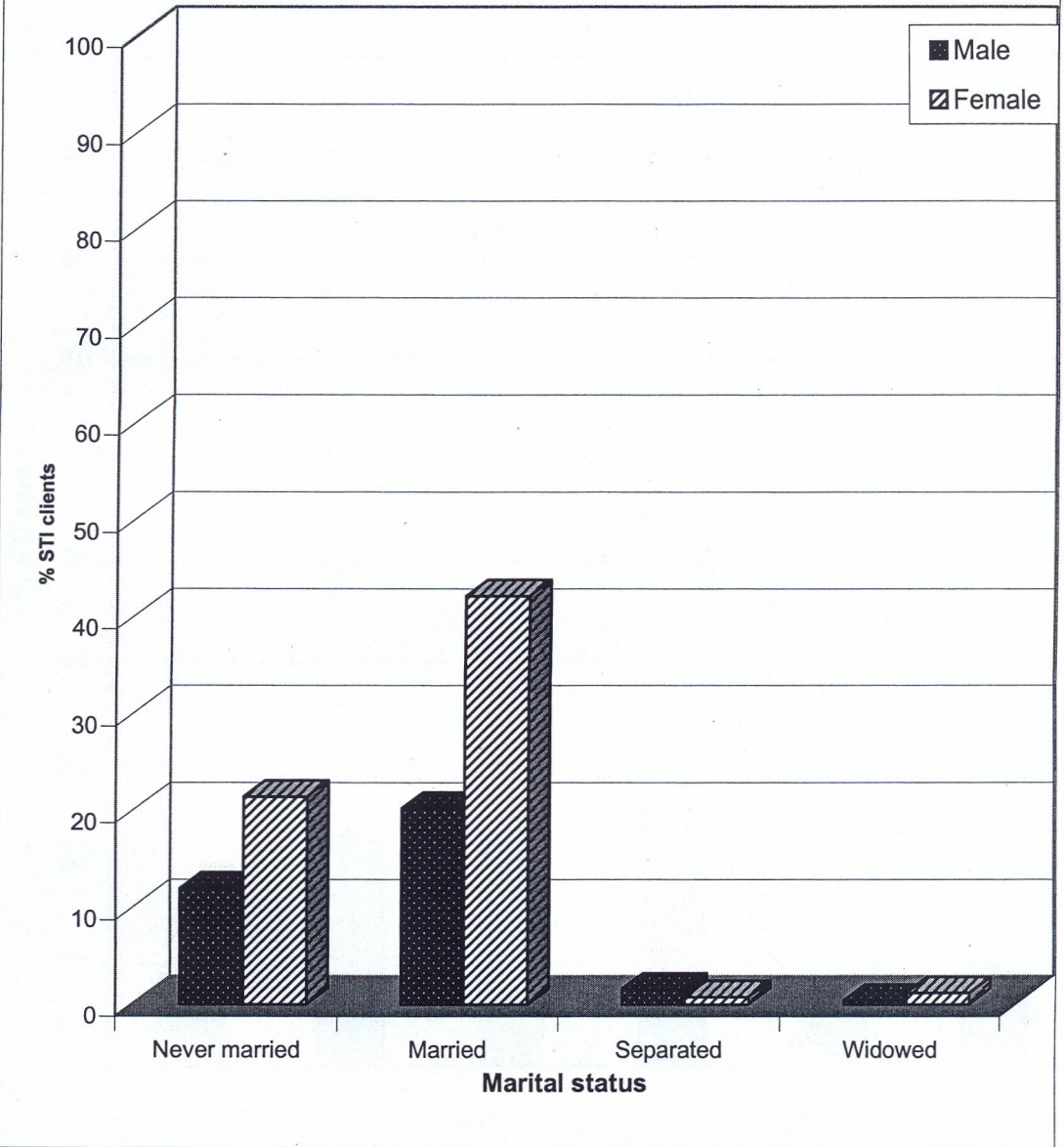
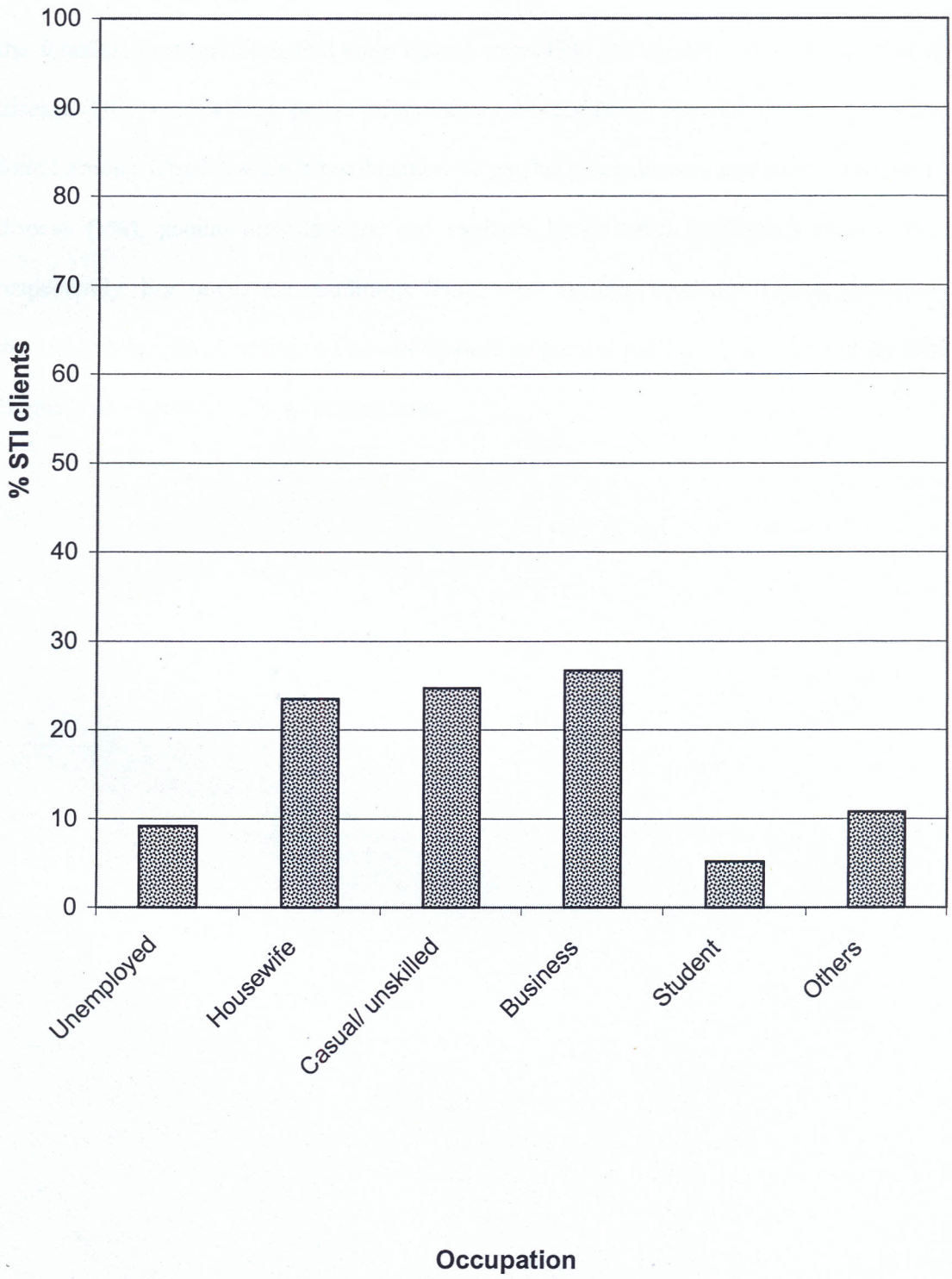


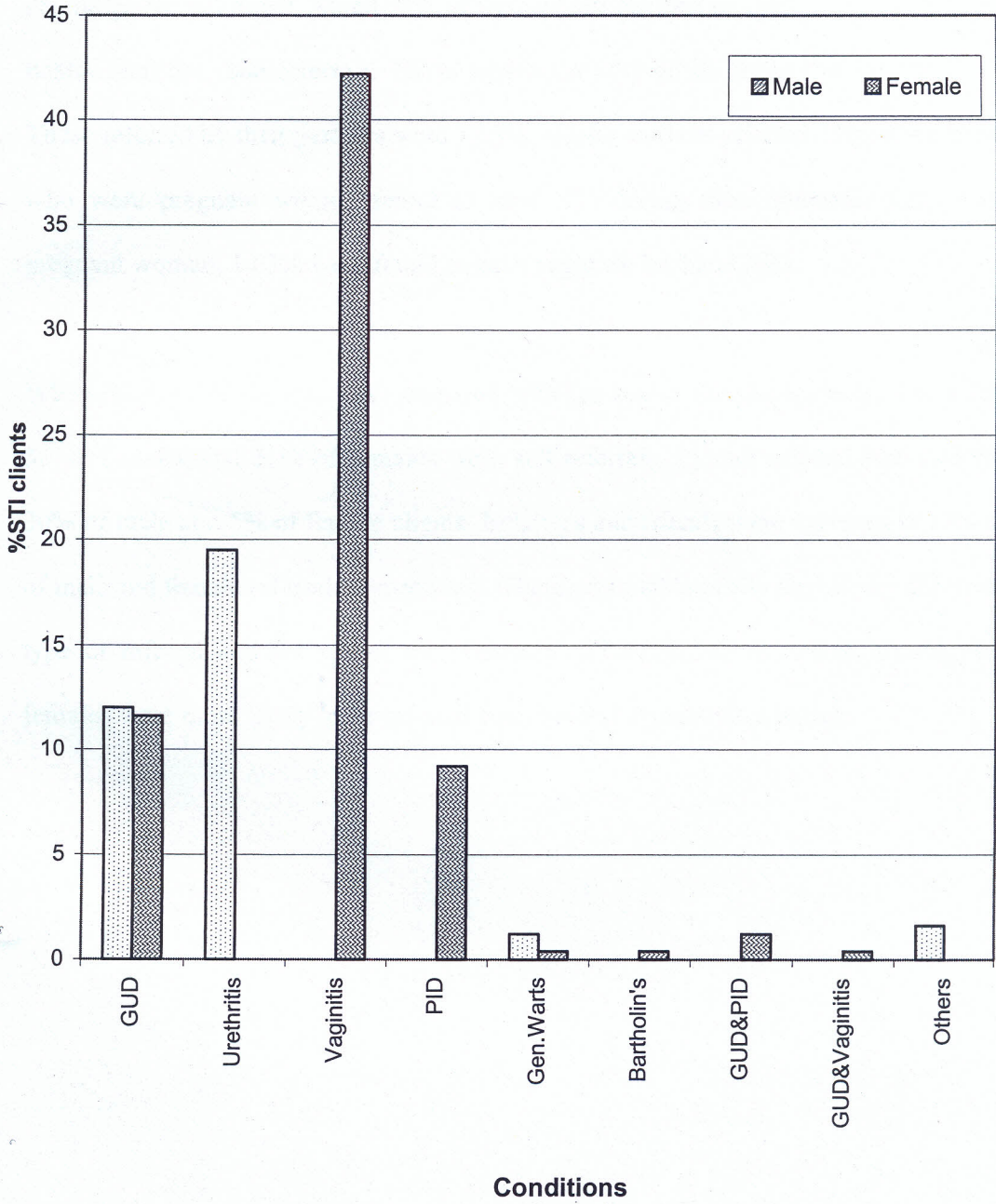
Figure 5: Occupation of Clients



### **3.1.4: Common Diseases among clients**

The conditions for which clients sought care at the health facilities varied (Figure 6). Among the females, the conditions that were treated were 43% for vaginitis, 12 % for genital ulcer disease (GUD) and 9% for pelvic inflammatory disease (PID) respectively. Other conditions found among females were a combination of genital ulcer disease and pelvic inflammatory disease (1%), genital ulcer disease and vaginitis (0.4%) and Bartholin's abscess (0.4%) respectively. For males the conditions found were urethral discharge (20%), genital ulcer disease (12%), genital warts (1.2%) and dysuria or painful urethra (2%). Among the female clients with vaginitis, 17% were pregnant.

Figure 6: Conditions found among clients by gender

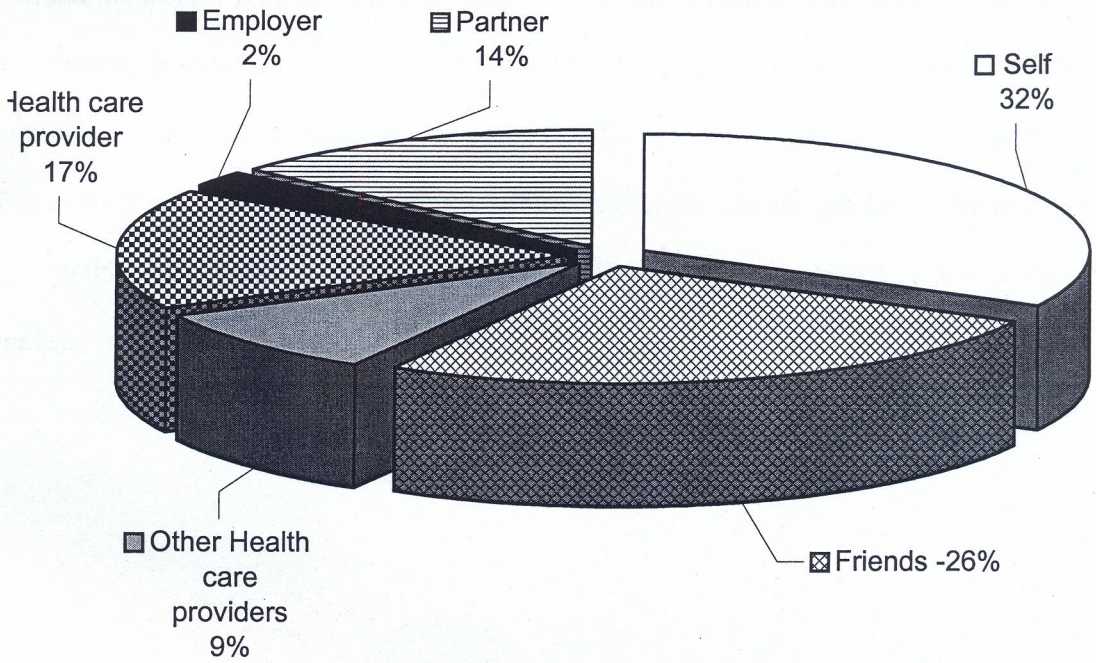


### **3.2: Respondents' health seeking behaviour**

#### **3.2.1: Referral system**

Clients visiting health facilities were asked where they sought help in regard to where they should go for treatment. About 33% of the subjects decided on their own to seek care at these health facilities (self-referral). Those who were advised by friends or relatives were 26%. Those referred by their partners were 13.5%. Health workers referred 17% of the clients all of who were pregnant women found to have STI during their antenatal visit. Among the pregnant women, 14.3% were found to have vaginitis 2% had GUD.

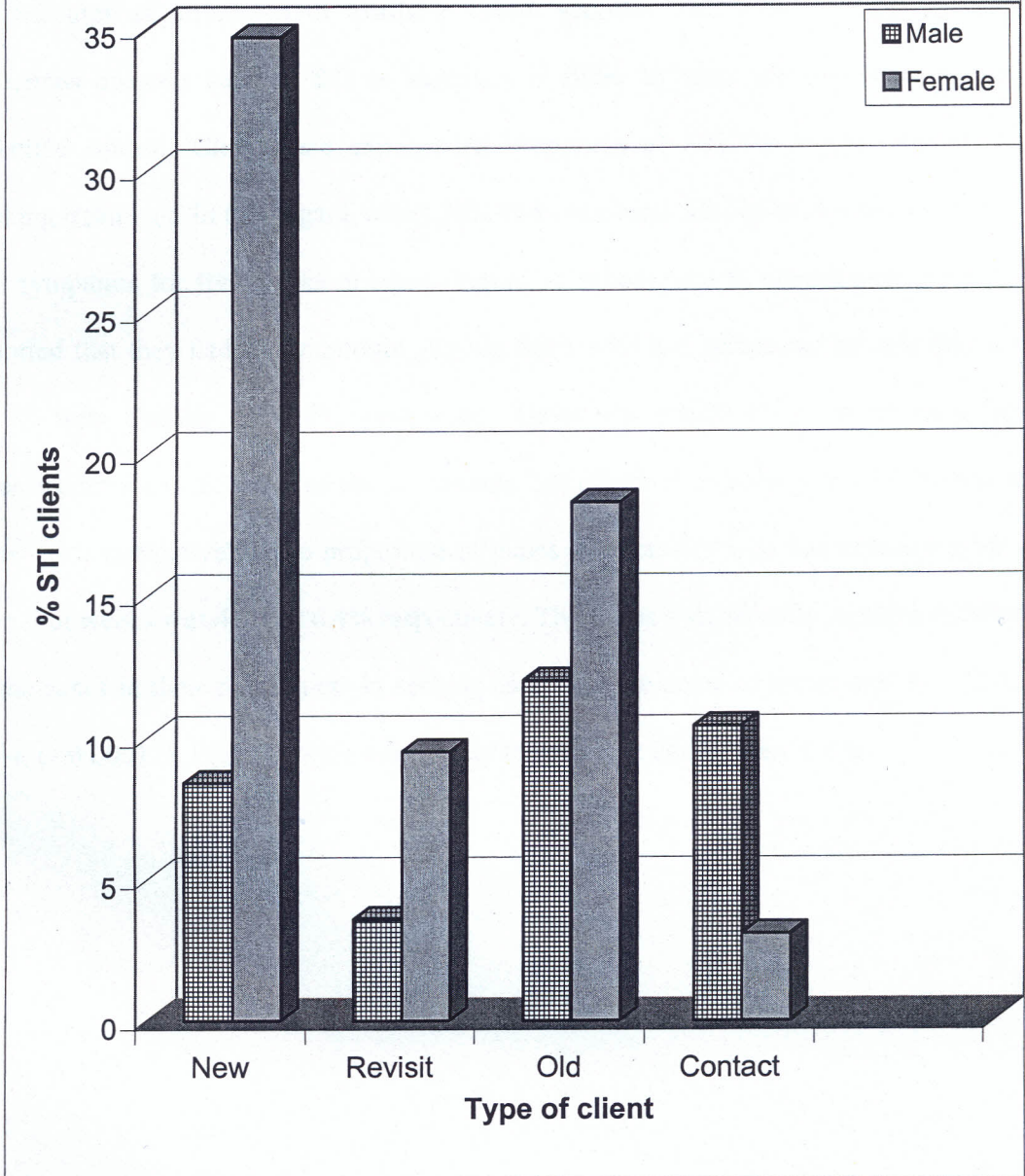
When the type of referral was compared with the sex of the respondents, it was found that 36% of males and 31% of females were self-referrals. Partner referral was evident among 30% of male and 5% of female clients. Relatives and friends were involved in 27% and 25% of male and female referrals respectively. There was a statistically significant difference in the type of referral and the sex of the clients ( $\chi^2=51.74597$ ,  $df=5$ ,  $p=0.0000$ ) suggesting that females were more likely to be referred from several sources than males.

**Figure 7: Referral Systems used**

### 3.2.2: Type of Client

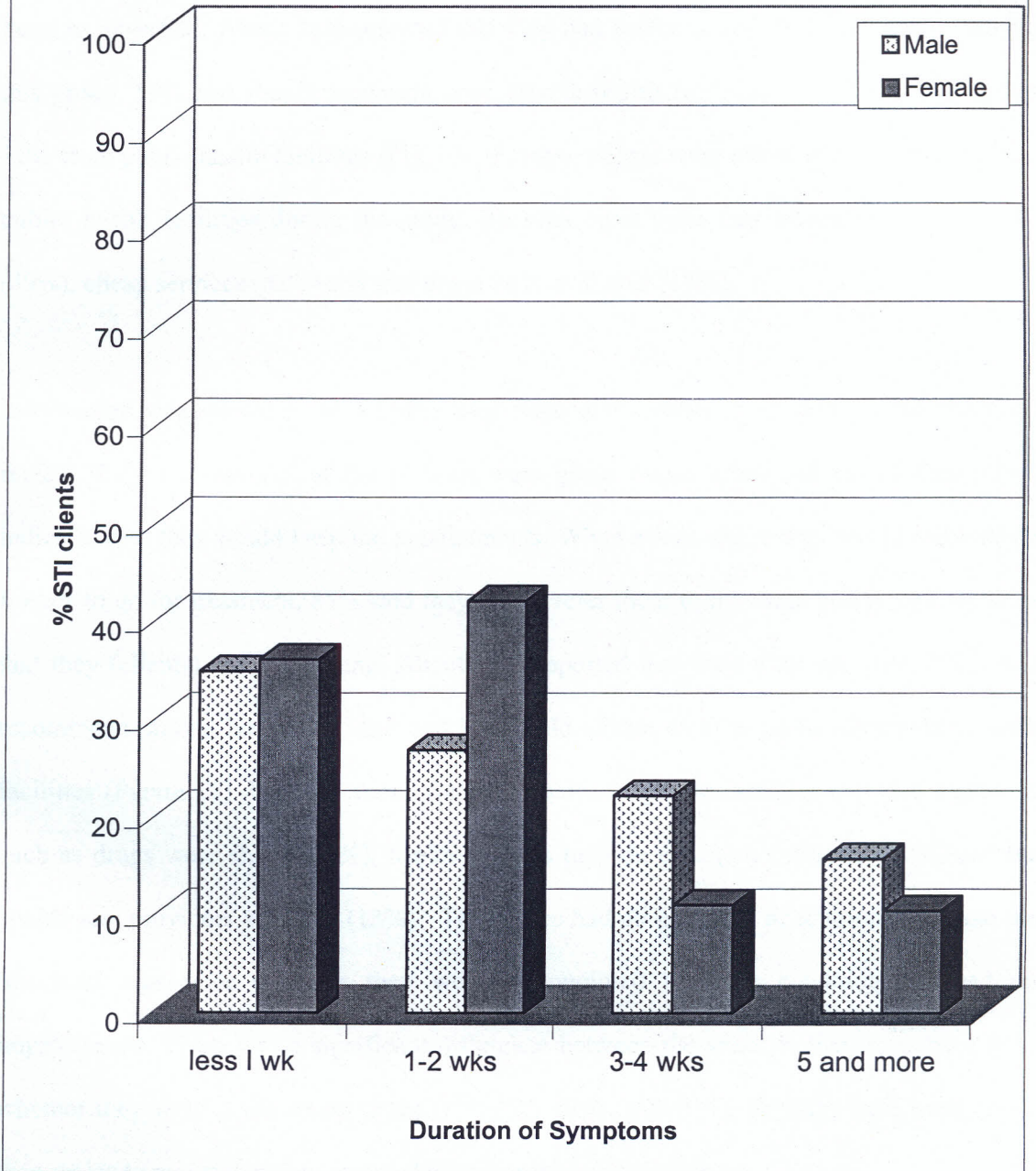
Clients were grouped according to whether they were new, old, revisit (follow up) or contact. New clients were those coming for treatment for STI for the first time ever, old clients were those who had been treated for a similar problem some time before and this was another episode. Revisits were clients who were currently under treatment or had just completed it but needed to be reviewed by the health care provider. Contacts were partners of client recently treated or under treatment, regardless of whether they had symptoms or not. New clients formed the largest proportion of the group (43%), and revisits had the smallest number (13). In relation to gender, males formed 8.4% of new clients and females were 34.7%. For contacts, males formed 10.4% of the group and females 3.1%. The distribution is shown in Figure 8 below. There was a significant difference according to the gender for the type of visit ( $\chi^2=39.054$ ,  $df=3$ ,  $p=0.000$ ). Females were more likely to seek treatment as new clients than males.

Figure 8: Type of client by gender



### 3.2.3:Duration of symptoms before seeking treatment

The time interval between the onset of symptoms of a disease and the seeking of treatment is an indicator of utilization of available health services. Additionally, early treatment of infectious diseases such as STI is important in order to break the transmission cycle for effective control. Clients had experienced symptoms of STI for varying periods before seeking treatment. In this regard, about 32% had symptoms for one to two weeks, while 10% had symptoms for five weeks or more (Figure 9). About 14.3 % clients were contacts who reported that they had no symptoms. Among those who had symptoms for less than a week 21.9% were females and 8.8% were males. Those who sought treatment between one and three weeks formed 32.3% of the population, out of which females were 25.5% and males were 6.8% respectively. The proportion of males and females who had symptoms for more than four weeks was 4% and 6.4% respectively. There was a statistically significant difference in the sexes in their promptness in seeking care after the onset of symptoms ( $\chi^2=23.31196$ ,  $df=4$ ,  $p=0.00011$ ). Females were more likely to seek care earlier than males.

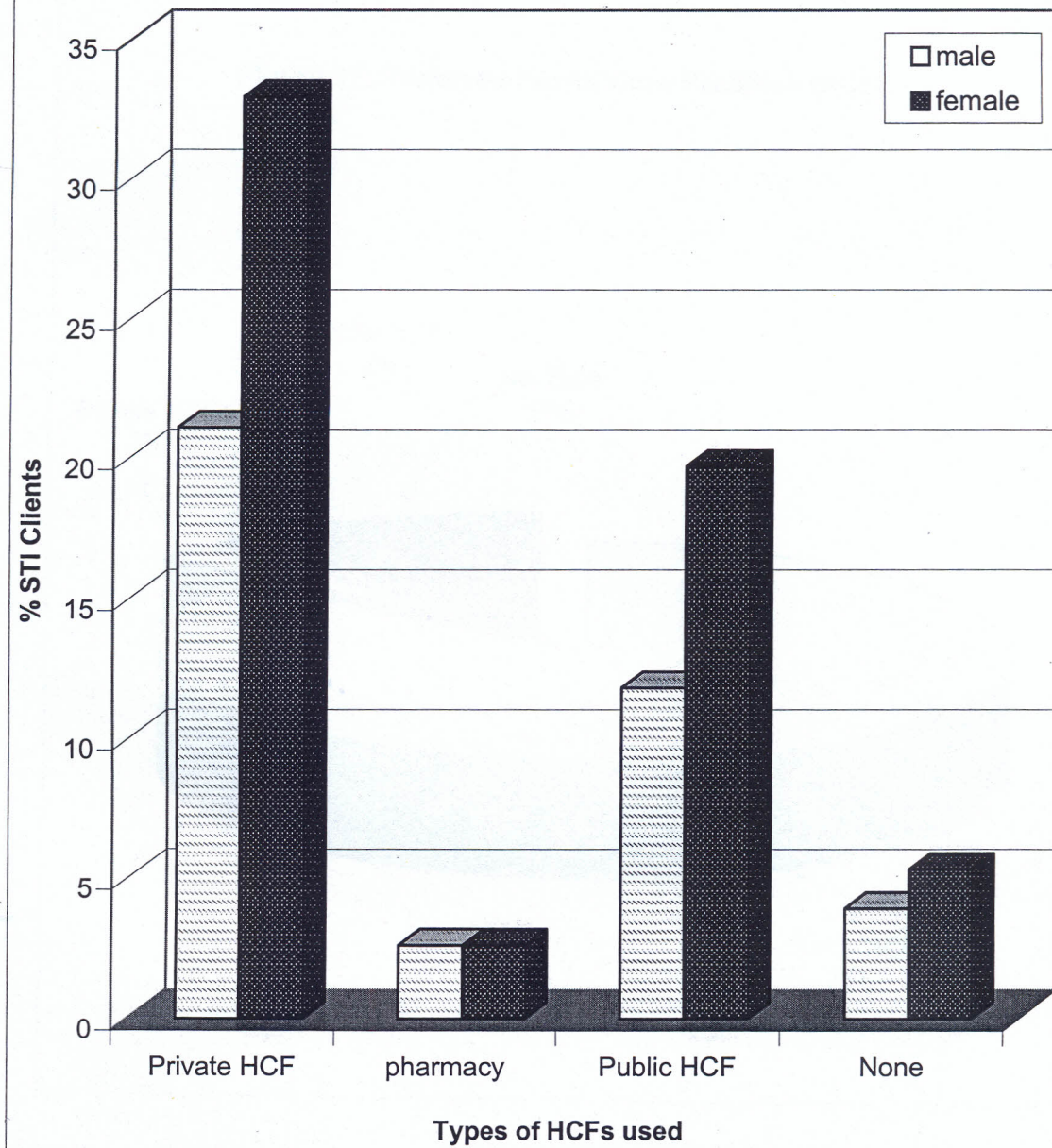
**Figure 9: Duration of symptoms by gender**

### 3.2.3: Preferred Health Care Facilities

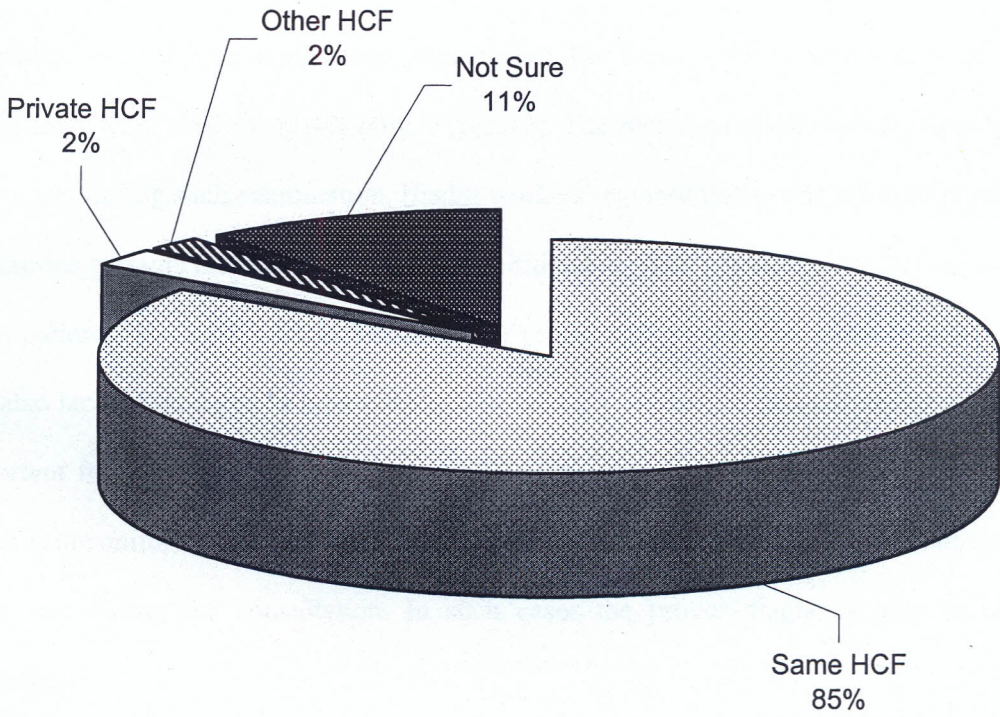
To find out the health systems of choice, clients were asked whether this was the first time for them to have STI. About 31% reported that they had suffered from STI previously. Among this group, 59% had sought treatment from private health facilities, 6% from chemists and 31% from public health facilities (Fig 10). Further, clients were asked why they came to the public health facilities during the study. Reasons cited were that treatment was effective (49%), cheap services (32%) and that drugs were available (19%).

Information was sought as to whether they were given dates to go back to the clinic for review. Fifty one percent of the patients were given return dates and out of these, 96% indicated that they would keep the appointments. When asked where they would recommend friends to go for treatment, 85% said they would refer them to the same health care facilities that they (clients) were attending. About 11% reported that they were not sure, 2% would recommend private health facilities and 2% would advise them to go to other public health facilities (Figure 11). Reasons stated for their choice of public facilities included responses such as drugs were cheap (52%), health workers provide effective treatment (20%) and the health care providers are good (13%). Those who had no intention of returning said that the treatment was poor (9%) or they were disappointed that the conditions showed no improvement. There was a significant difference between the sexes in their responses as to whether they were given return dates ( $\chi^2=5.992$ ,  $df=1$ ,  $p=0.014$ ). Females were more likely than males to report that they were asked to come back for review.

**Fig 10: Types of HCF used by clients during previous STI episode**



**Figure 11: Preferred Health Care Facilities (HCF)**

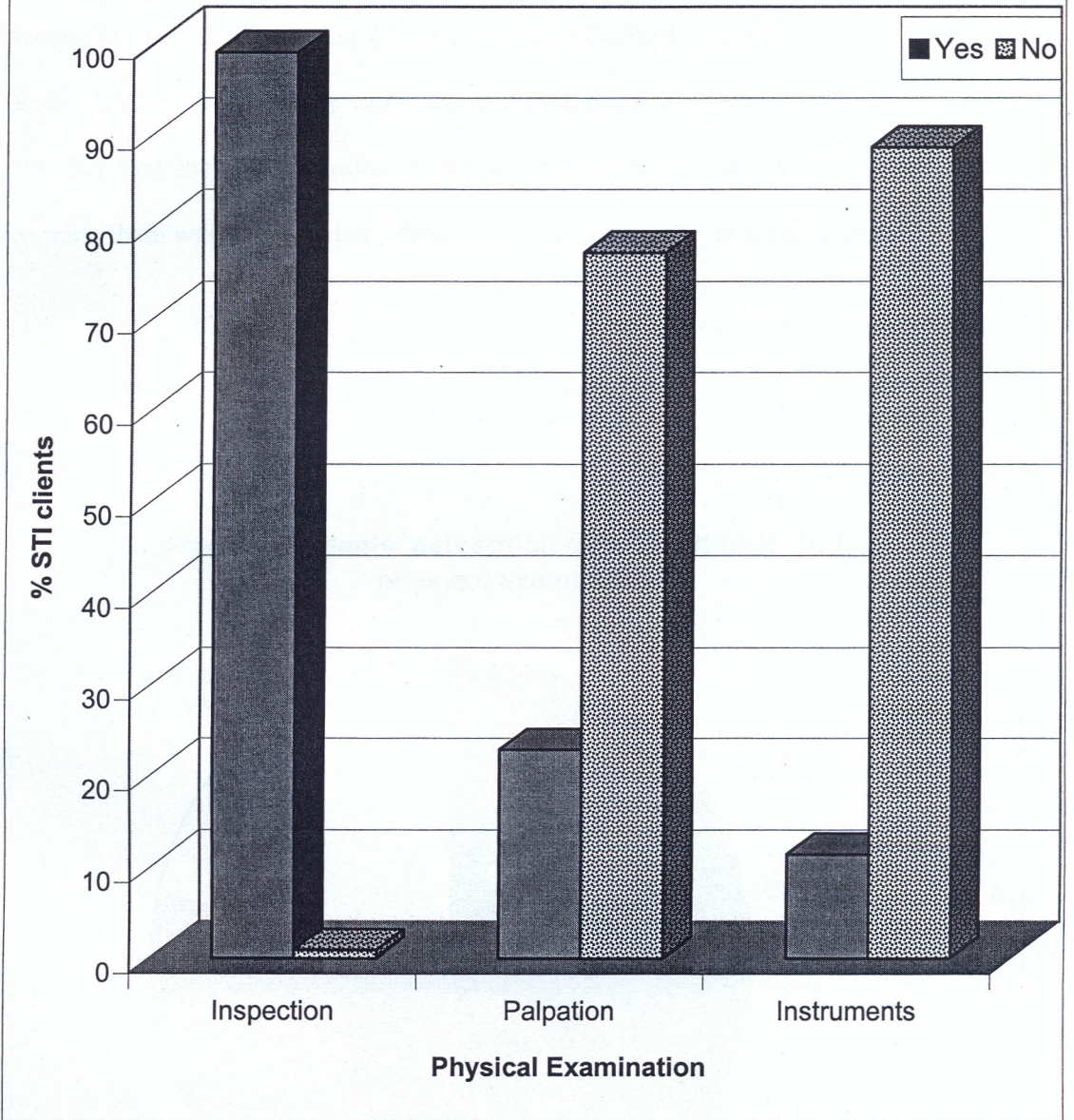


### **3.3:QUALITY OF CASE MANAGEMENT**

The factors that were considered as indicators of quality of STI case management were the performance of physical examination, education/counselling about the diseases, information on partner referral and type of interactions between clients and health workers.

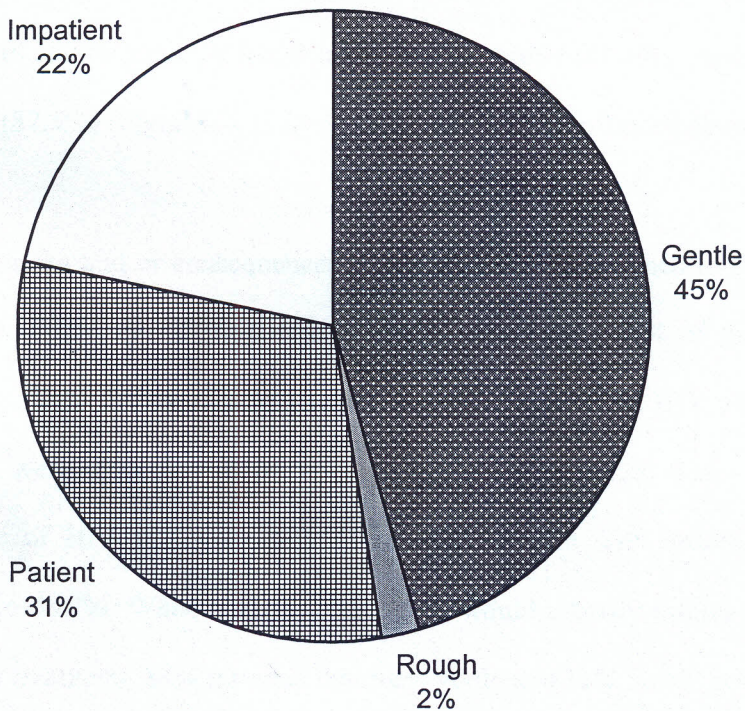
#### **3.3.1:Physical Examination**

Physical examination was conducted for 68.1% of the respondents. About 66% of males and 69% of females reported that they were examined. All the males and 81% of the females who were not examined reported that they would have liked to be examined. Most (99%) of the males were asked to expose their private parts. For females 99.1% were inspected, while instruments were used for 11.4% only (Figure12). The speculum is the most commonly used instrument during such examination. Health workers reported that it was not always possible to examine patients thoroughly. At times they did not conduct physical examination at all for some patients. Reasons cited included lack of proper equipment such as speculums, gloves and also lack of time due to long queues. But they acknowledged that examining patients is important for proper diagnosis to be made. Further, they reported that patients sometimes found it uncomfortable to talk about their problems and they may not mention some of the symptoms during the consultation. In such cases the proper diagnosis may be missed altogether.

**Figure12: Physical examination conducted on female clients**

The manner in which a client is handled during examination may determine how the client views the care he/she has received. Information was sought to determine how clients felt about the way they were handled by health care providers during physical examination. Among the female clients that were examined, 46% felt that the health care providers were gentle and 31% thought they were patient during physical examinations (Figure 13). Those who felt that the health workers were impatient (22%) reported that the time taken to examine them was very short and they were rushed through the whole process.

**Figure13: Clients' perception of HCP attitude during physical examination**

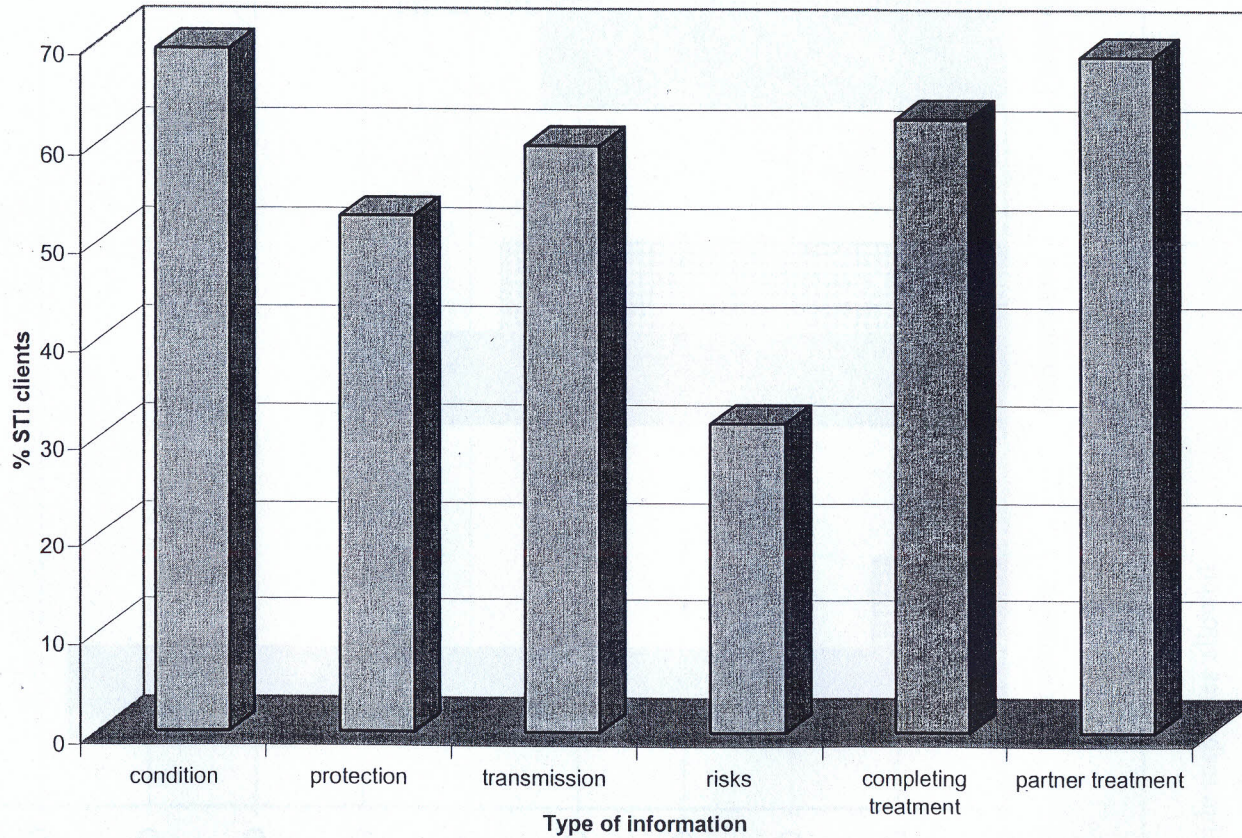


### 3.3.2: Counselling provided about STI

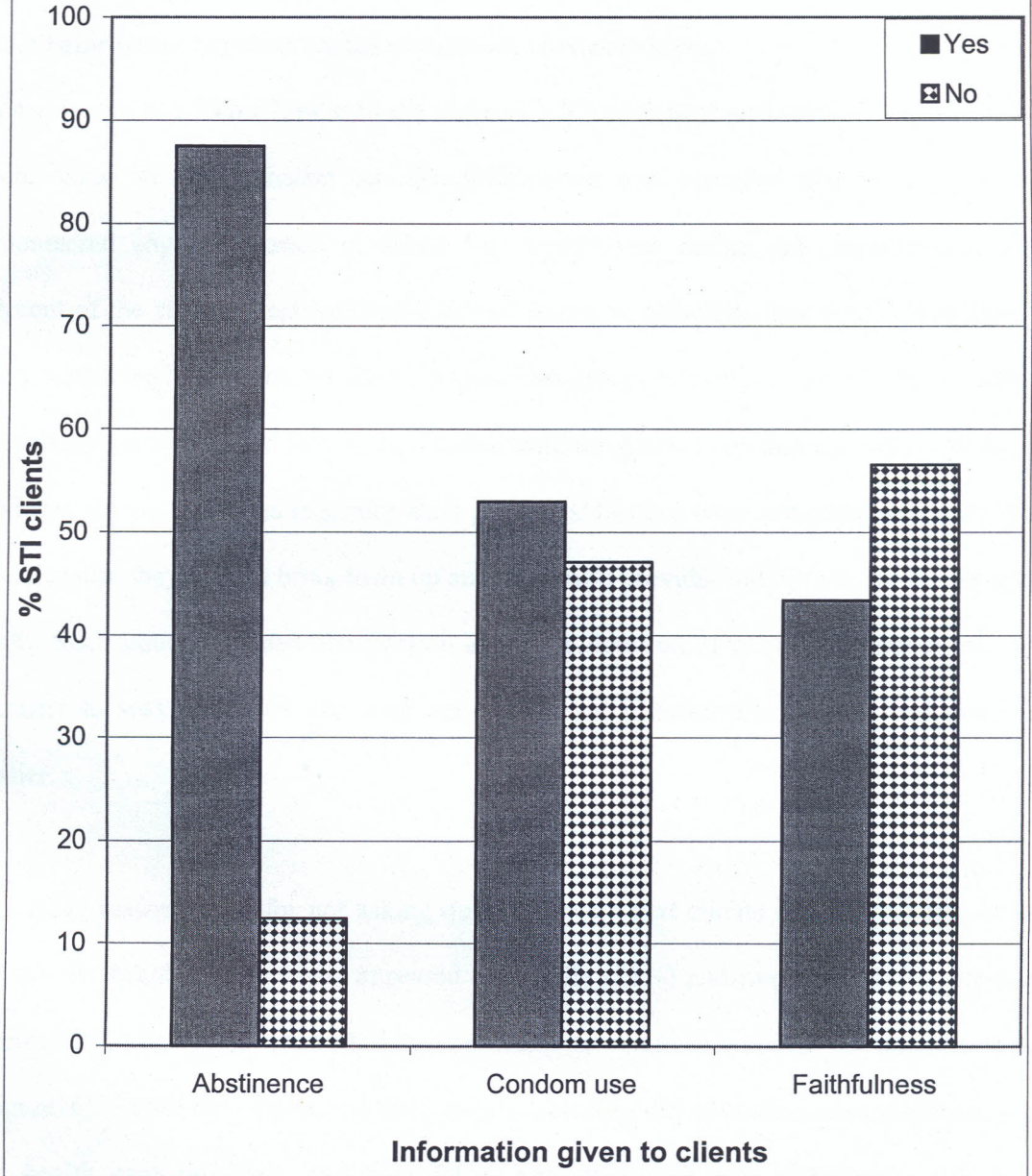
The type of information provided to clients about STI is a very important part of care. Subjects were asked to comment on whether the health care provider had informed them about the following issues: type of STI, that STI are sexually transmitted, the importance of taking the full course of treatment, how to prevent STI, the importance of treatment of partner and the risks associated with STI. A client who was provided with information on at least four issues was considered to have received adequate information about STI. Adequate information was provided to 63% of the patients. A fair amount of information was provided to 19.9% of the clients. On individual issues, 69% were told what problem they or their partners had, 60% were told how the disease is transmitted and only 53% were told of measures they can take in an effort to prevent infections in future (Figure14). About 68% of the subjects were told to take the full course of treatment as prescribed. About 69% of clients reported having been told that their partners should be treated. The risk reduction measures mentioned to clients included faithfulness to ones partner (43.4%), condom use (52.9%) and abstinence (87.5%) (Figure15). Only 31% of clients were informed about the risks of STI.

Among the risks and or consequences, HIV/AIDS was mentioned to 54.4% of the clients, followed by infertility (25.0%). On further investigations, 63% of the respondents were found to be aware that one could have a conventional STI and HIV infection concurrently and 21.5% were unaware of the relationship. Another 15.5% were uncertain as to the concurrence of HIV infection and STI. Those provided with information about partner referral were 68.7%. When asked whether they would actually inform their partners about the need for treatment, 84% reported that they would and 11% would not do so.

Fig 14: Type of information provided by HCP



**Figure 15: Information on Risk Reduction measures provided**



Multiple responses allowed

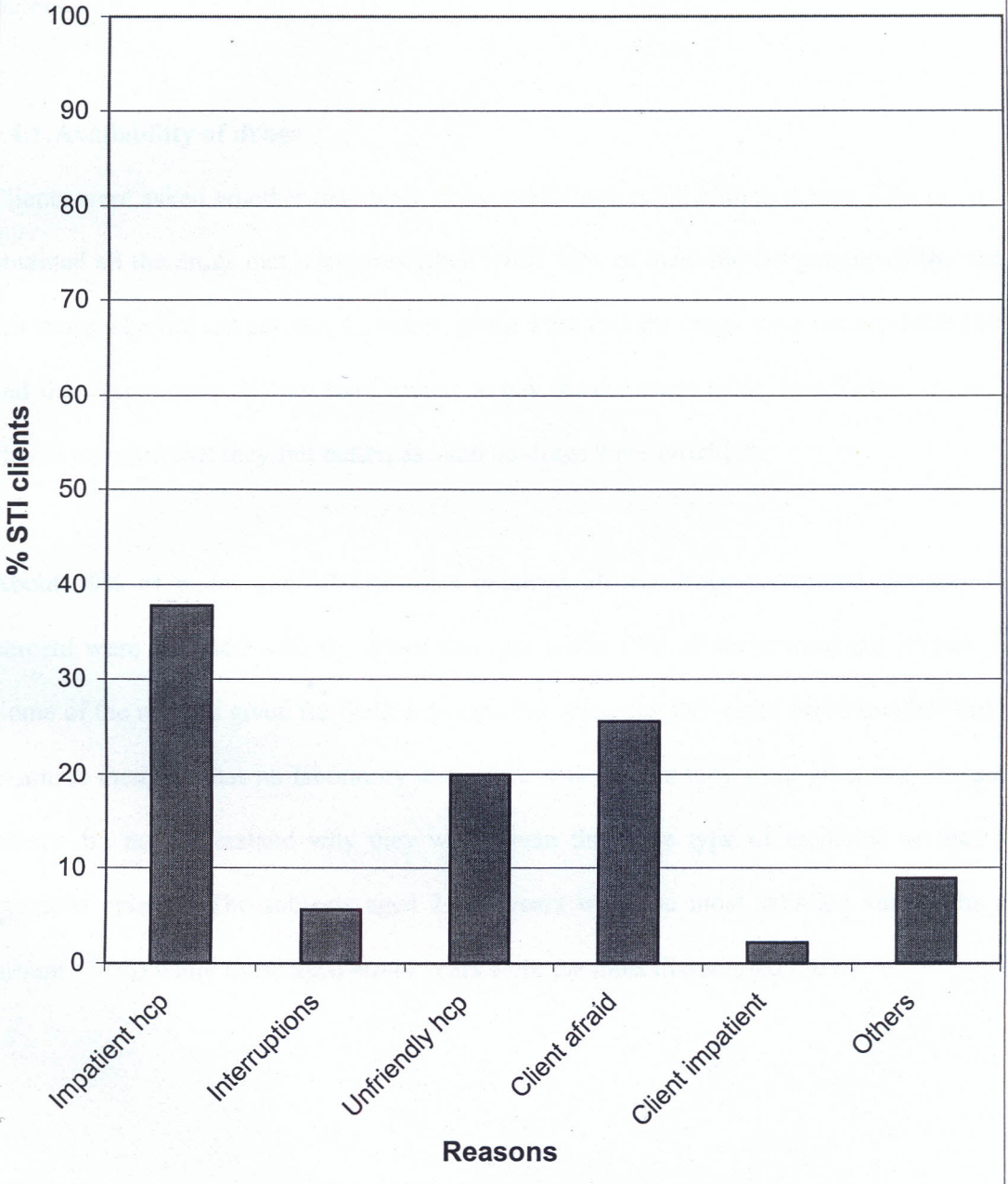
Out of the 125 subjects who were not informed of any preventive measures, 71.1% reported that they were aware of such measures and of these, 30% were males and 41% were females.

### **3.3.3. Interaction between clients and health care providers**

In an attempt to find out how well the subjects felt free to interact with health workers, they were asked to state whether specific information was provided and whether patients volunteered any information or asked for clarifications during the consultations. Sixty percent of the subjects reported that they had issues or questions they would have liked to clarify with the health care providers. Among this group, 39% reported that they brought up the issues themselves and they were satisfied with the discussions that followed. But for the majority (61%), questions regarding their problems/diseases were not addressed at all. This was because they did not bring them up and the health provider did not ask the clients about them. Such issues included clarification about the duration of treatment, how to tell their partners to seek treatment and why one should get infected after having had treatment earlier.

The main reasons cited for not asking questions were that clients did not feel free to ask (26%), the health care provider appeared unfriendly (21%) and impatient (38%). Frequent interruptions by other staff during consultations were mentioned as another factor (Figure 16). About 10% males and 30% females felt they did not have issues to discuss with the health care providers regarding STIs. The difference was statistically significant ( $\chi^2=6.787$ ,  $df=1$ ,  $p=0.009$ ). Males are more likely than females to have issues to discuss with the health care providers regarding STI.

**Figure 16: Reasons why issues were not discussed adequately**



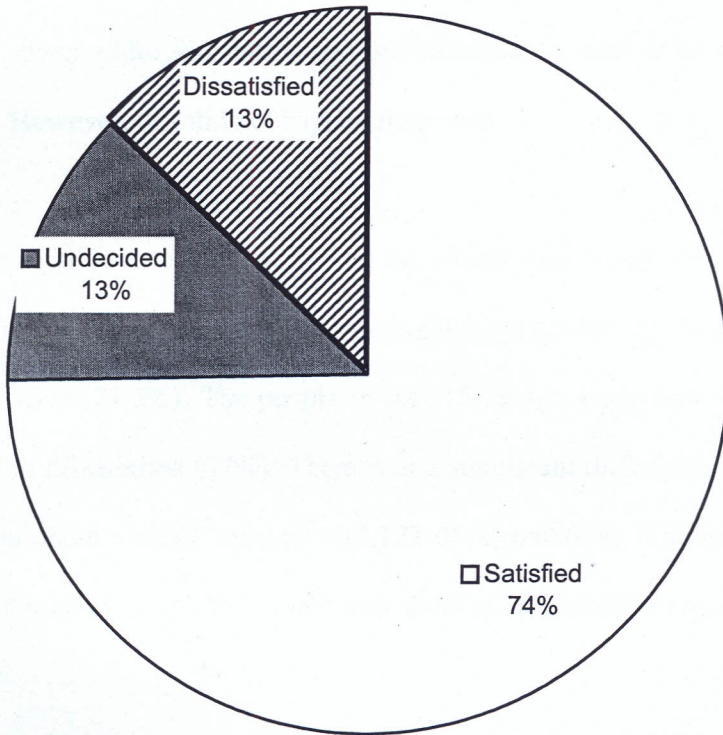
### **3.4: ORGANIZATIONAL FACTORS**

The availability of drugs, the perceived level of anonymity and the amount of time it took before a client was attended to were the factors considered in relation to organizational factors.

#### **3.4.1: Availability of drugs**

Clients were asked whether they were given medicines at the clinics. About 72% of clients obtained all the drugs that were prescribed while 18% of them did not get any of the drugs. For those who did not get drugs, reasons given were that the drugs were not available (14%) and that respondents did not have money to pay for the drugs (5%). In addition, 6% of the clients reported that they felt better, as such no drugs were provided.

About 79% of males and 69% females obtained all the drugs prescribed. Seventy four percent were satisfied with the drugs they got while 13% of them were not (Figure 17). Some of the reasons given for feeling dissatisfied were that the health care providers did not examine them, or that no laboratory tests were done before they were given the drugs and others did not understand why they were given the same type of medicine as during a previous episode. The subjects aged 24-29 years were the most satisfied among the age groups (77%) while those aged 40-44 years were the most dissatisfied (50%).

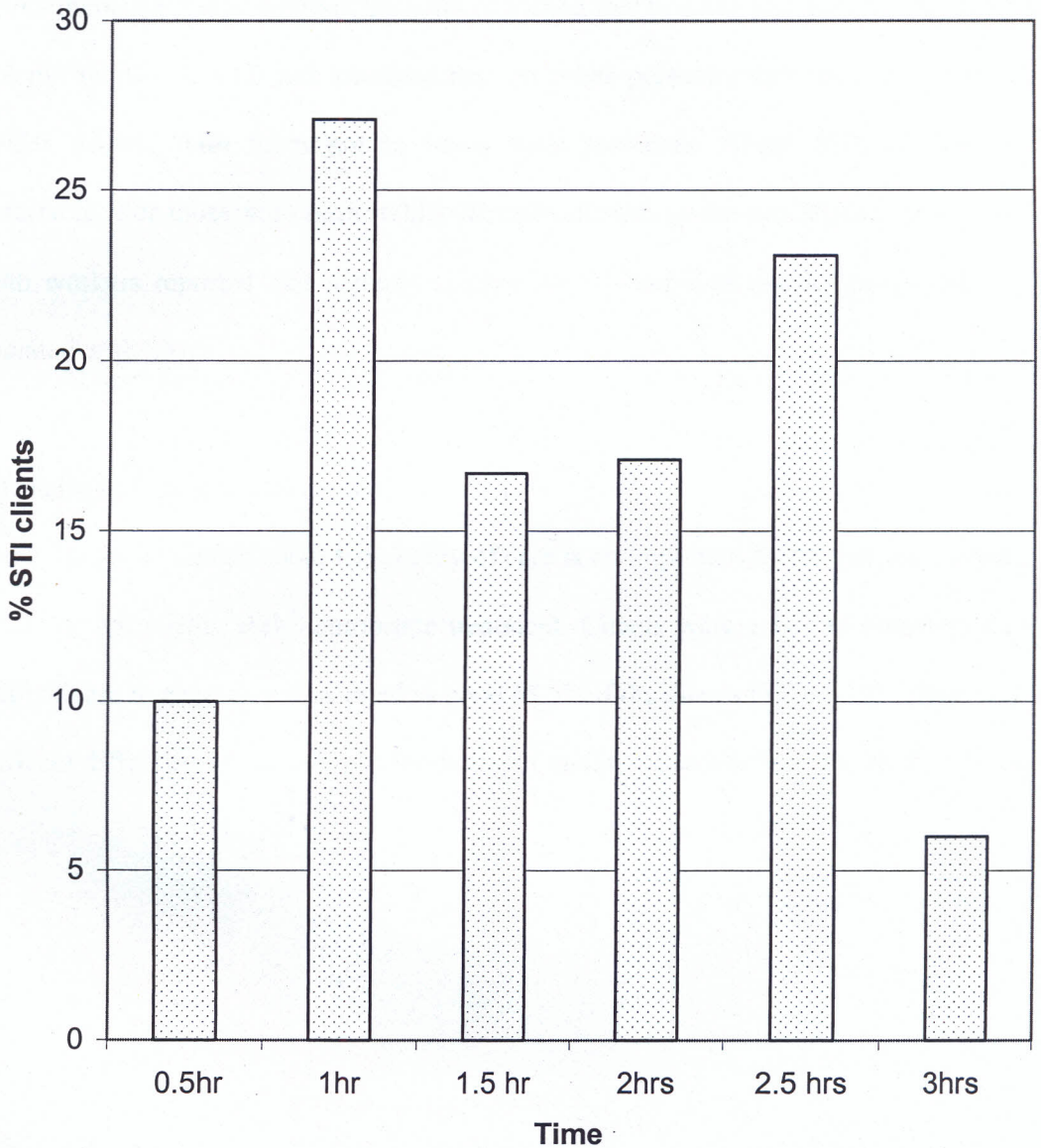
**Figure 17: Satisfaction with drugs prescribed**

### 3.4.2: Waiting time and charges at the health facility

Twenty seven percent of the respondents waited for about an hour to be seen and 10% waited for about three hours. The range in waiting time was between less than half an hour and three hours (Figure 18). Health workers explained that, while there is one person responsible for dealing with people with STI in most health facilities, sometimes the same person was given additional duties and this affected the time it took before a client was attended to. However, this did not happen frequently.

Further investigation revealed that 72% of the clients were happy with the time it took them to be seen by the health care provider. Among the age groups, 25-29 years had the majority of those satisfied (21.5%). The people in the 15-19 age group had the highest number of those who felt dissatisfied (47%). There was a significant difference among age groups on their feelings about waiting time ( $\chi^2 = 15.177$  df=6, p=0.019). Younger people were more likely to be dissatisfied with the time it took them to be attended to than older people.

Clients were asked to state how they felt about money charged for the drugs they obtained. In most health facilities, a client paid for each type of medicine prescribed if it was available. The charges were subsidised. Eighty five percent of the respondents felt that the charges at the health facility were fair and 7% felt they were high. A few clients did not get drugs because they were unable to raise the money needed. In one health facility clients were given drugs on the understanding that they would pay once they got money. Health care providers observed that very few of such clients came back later to pay.

**Fig 18. Time taken by clients to be attended to**

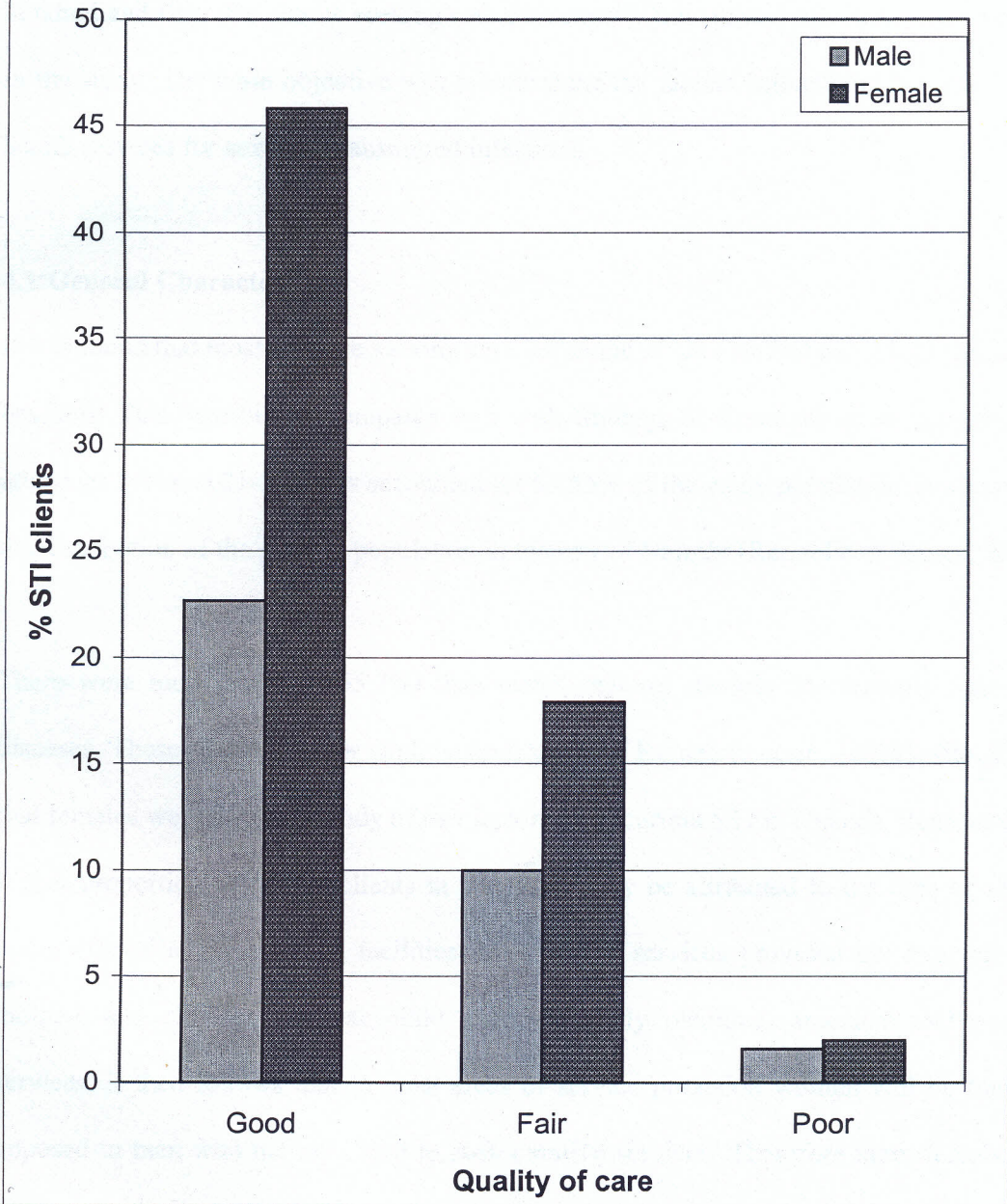
### **3.4.3:Level of anonymity among STI clients**

Clients were asked to state whether they felt comfortable coming to the health facilities for STI treatment. Such comfort took the form of feeling free to come to health care facilities for problems related to STI and knowing that no other persons other than the health care provider dealing with them got to know their problems. About 85% of them were comfortable. For those not comfortable, the main reason given was stigmatization (79%).

Health workers reported that patients coming for STI services usually do not like to be associated with STI.

### **3.4.4:Rating of the quality of care**

The perception of clients about the quality of care is an important factor that may determine whether or not clients seek appropriate treatment. Clients were asked to comment on the quality of care in general. It was rated as good 68.5%of the clients (Figure 19). There was no significant difference in the sexes in the rating of quality of care ( $\chi^2=0.576$ ,  $df=2$ ,  $p=0.750$ )

**Figure 19: Rating of quality of care by gender**

## CHAPTER 4: DISCUSSION

### 4:DISCUSSION

The study was conducted in four health centers under the Nairobi City Council. Two hundred and fifty one clients seeking care for sexually transmitted infections were recruited in the study. The main objective was to determine the factors influencing the utilization of health services for sexually transmitted infections.

#### 4.1:General Characteristics

It was found that most of those seeking care fell in the 20-24 (28.7%) and 25-29 (28.3%) age brackets. This distribution compares well with findings of Komalafe *et al.*, (2000) where attendees between 21-30 years accounted for 53.55% of the study population. It also reflects the distribution of the general population in the city of Nairobi (Republic of Kenya, 2001).

There were more females (65.7%) than males seeking services for sexually transmitted diseases. These findings differ slightly from those of Komalafe *et al.*, (2000) who reported that females were 58% in a study of risk factors for recurrent STI in Uganda. Reasons for the higher proportion of female clients in this study may be attributed to the type of services being offered at these health facilities. Most of the services provided are directed at the mothers and children such as child welfare, family planning, antenatal and postnatal services. It then follows that in most areas of service provision women will be found, as opposed to men who mainly come to seek curative services. Therefore more females than males are to be found in a given health facility on any day. Thus many men do not seek care in such facilities as observed by Henry, (1995). The services provided at these health facilities should be therefore diversified to attract more males. Females were represented in all the age groups but there were no males in the 15-19 year age group.

More than half of the respondents (55.6%) had a low level of education. Those with college education and above were 9.6%. There were more females (44.6%) with a low level of education compared to males (12%). Sixty three percent of subjects were married while 34% were not married. About 47% of females in the 15-19 year age group were married showing that women married at an earlier age than men.

The commonest condition found among client was vaginal discharge (50%), followed by genital ulcer disease (GUD) (23%). Research has shown that ulcerative STI increase the susceptibility to or transmissibility of HIV infection (Grosskurth *et al.*, 1995 and Hayes *et al.*, 2001). Hayes *et al.*, (2001) say that there is overwhelming evidence that GUD plays a key role in the spread of HIV infection in Africa. The painless genital sores of primary syphilis (GUD) frequently go unnoticed by women and they do not seek care. This may contribute to the high prevalence of GUD, as a direct result of the spread. Even when noticed, the fact that it is not painful may not encourage one to seek care. The continued high prevalence rates of genital ulcer disease cases are of concern due to their association with HIV infection.

#### **4.2: Health Seeking Behaviour**

About 37% of the subjects in the study had suffered an STI in the past one year. In South Africa, Harrison *et al.*, (1998) reported that 27% of clients in their study had been treated for an STI in the past three months. These findings indicate that STIs are common infections among populations especially in developing countries like Kenya. Benjarattanaporn *et al.*, (1997) established that among men attending an STI clinic in a government health facility in Bangkok, 19% sought multiple treatments for prior STIs because of an incomplete response to treatment. Thus the taking of inappropriate treatment is an important cause of high disease

prevalence. Incomplete or inadequate doses of treatment may give rise to infections that are difficult to treat later as the organisms may develop resistance to drugs normally effective.

Delay in seeking appropriate treatment is a common problem in the control of STIs. In this study only 31% of subjects presented themselves for treatment within one week after the appearance of symptoms and 23% sought care after having symptoms for three to five weeks. This differs with the report of Harrison *et al.*, (1998) in which 75% of patients in South Africa presented themselves for treatment within one week of symptom onset. In a study by Blaukhart *et al.*, (1999) a high proportion of pregnant women with STI in the Republic of Central Africa were said to recognize clinical symptoms of infections, yet only a minority actively sought treatment, and only half of those contacted the formal health system/sector. A study in rural Kenya by Moss *et al.*, (1999) found that delays in seeking care were common. Reasons for such delays even when symptoms are recognized include the fear of disclosing that one has an STI and feelings of shame. Delays in seeking care lead to more spread of STI. Delayed or inadequate treatment of STI may also lead to infertility among men and women (WHO, 1997).

Patients seeking STI care utilized several referral systems. Referral is the process of sending or guiding someone to another place for assistance. The lay referral system involves consulting people who do not have any medical/health background such as kin, friends and respected members of the community in preference to, or before professional advice is sought. In the study both males and females utilized lay and professional referral systems. Twenty percent of females and 12% of males were self-referrals. This may indicate that they were aware that they needed to have a check up and that help could be obtained in the public facilities they went to. Accessibility of networks can influence the extent to which the

person needing assistance can avail himself/herself of these services (Philips D. R. 1990). Partner referral is one of the strategies of STD management (WHO, 2001). Those referred by partners (contacts) were only 14% of the group in the study. Partner referral was the least used among other referrals, and yet it is one of the most important. In the study by Harrison *et al.*, (1998) only 6% of those treated were contacts.

Sixty nine percent of clients were informed about partner referral, yet only a few were treated as asymptomatic partners during the study. It is expected that more people should seek care as result of being asked to do so by their partners or after finding out that their partners are sick. There is an apparent discrepancy between the number of partners actually treated, the information provided to clients by health care providers about the need for the treatment of partners and the disclosure by clients that they would ask their partners to go for treatment. Clients should therefore be encouraged to refer their partners for treatment whenever the opportunity arises.

#### **4.3:Quality of case management**

Overall 67 % of clients were examined. Physical examination was conducted for 66% of males and 69% of females. This compares well with a study carried out in Nairobi by Helen *et al.*, (2000) where 66% of patients seeking STI care were examined. The study used various tools to collect data such as interviews and observations. Different types of health care facilities including public, private and NGO clinics were also used. In addition to the clients and health care providers, the study also used simulated patients. In the current study there were very small differences between the numbers of males and females (66% and 69% respectively). They concluded that public facilities performed better in respect to performing

physical examination than the other types. This study found that performance of physical examination was good.

In a study conducted among commercial sex workers in India, Evans and Lambert (1997), reported that this group preferred to use private health care facilities because health workers took time to examine them. They associated having more time with the health care provider with getting the appropriate treatment for their ailment. In this study, 22% of the clients reported that physical examination was done hurriedly. For this group of clients, this perception may affect future use of public facilities. The negative perceptions should be addressed appropriately.

Overall, information about STI was provided to about 64% of the clients compared to 48% as reported by Harrison *et al.*, (1998). On individual areas of information, 68% of clients were informed about compliance with drugs and 41% on condom use. Those told about HIV risk in that study were 67%. O'Hara *et al.*, (2000) found that clients were informed about issues related to STI at different rates in the different health facilities. Overall, more clients attending private facilities obtained less information compared to those attending public facilities 54% in that study. The low rates for information on condom use could be explained by the fact that some of the clinics run by some church organizations do not provide information on condom use. Other differences in the results could be due to the methodologies used. For example where observations are used, the researcher may pick out the information provided, which the client might have forgotten about due to various reasons such as being apprehensive or embarrassed (Makoul *et al.*, 1999). In the current study, information about the risk of HIV infection scored very low and would cause some concern given that the condition is not curable unlike most of the other STI. In a study in Zambia,

Faxelid *et al.*, (1997) reported that client satisfaction was closely related to the amount of information provided by health care providers. In the current study health workers were of the opinion that clients were aware about most of the issues relating to STI. However, each client should have been asked whether he or she knew about those issues, how well, and the areas they were short of addressed by the health workers according to each client's knowledge.

The manner in which a health worker passes information regarding the patient's problem has an effect on whether the client understands the information or not. If the issue is understood, there is a likelihood that the client will comply with instructions given thereafter. In respect to the interaction between health care provider and the clients, 40% of clients were satisfied with the information provided. A large proportion of clients who had questions to be clarified went home without the answers. The reasons given may indicate that the perception of the client about the health care provider is rather poor as far as their need to obtain information is concerned. On the other hand patients have been said to be passive recipients of information from health care providers, without seeking to be active partners in the dialogue during consultations (Makoul *et al.*, 1999 and Ong *et al.*, 1995). Clients should be encouraged to look at themselves as having important roles to play in order to get well, and learning all about their diseases would help in directing their actions.

#### **4.4:Organizational factors**

Although majority (72%) were happy with the time they waited, the situation could be improved so that patients do not wait for long. In most health care facilities, patients who come early are expected to wait for a session of health education on various topics as determined by the health care providers. While the idea is good, the managers of the health

facilities should address the problem of time in relation to the client. It was noted that among those who waited up to one and half hours 88.8% were satisfied. The majority of the ones dissatisfied had waited longer. Henry, (1995) said that the benefits of reduced waiting times include improved attendance rate at the first appointment. She reported that many people faced with long waits at the clinics opt to buy drugs at pharmacies and markets to treat themselves.

Seventy nine percent of patients obtained all the drugs that were prescribed. However, as reported by the health care providers, drugs are not always available in the clinics. During periods of drug shortage, clients rarely come to the clinics. Allen *et al.*, (1996) found out in Ethiopia that many clients did not seek care for STI early. They reported that this was due to among other factors, shortages of medicines and other supplies. Reasons cited for the shortages were not clear, but it was reported that once requisitioned, it takes some time before the drugs are received at the health care facilities. The unreliability of drugs does not encourage use of the facilities. Effective management and control of STI requires that all drugs should be available and affordable to those who need them. WHO (1997) stated that the consistent availability of drugs is an absolute requirement for the prevention and control of STI.

The overall perception of the type of care provided at the public facilities was good (68.5%). Clients may be disappointed with some individual aspects of care but rate it as good generally. The hypothesis was rejected. For utilization, the aspect overall rating may have a bigger influence than the different aspects of care.

## CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

### 5.1: CONCLUSIONS

1. There were fewer men than women seeking STI services at the clinics
2. Delays in seeking STI care are common and these enhance the continued spread of the diseases in the population
3. Very few patients were treated as contacts although patients interviewed reported that they would request their partners to go for treatment
4. The supply of drugs was not always consistent and few clients sought care when they were in short supply.
5. In general, the quality of case management was good but information on risks of HIV infection and the use of condoms was found to be rather poor. The level of interaction between clients and staff was rather low.
6. Although patients were happy with waiting time a number of them waited for three hours or more to be seen.

## 5.2:RECOMMENDATIONS

1. Establishment of STI care centres that serve certain groups of people affected by the infections such as men in an environment in which they would be comfortable may encourage more use of public facilities.
2. Patients seeking to be treated for STI should be encouraged to seek care once they notice the symptoms of disease. This should be done during consultations when they seek care, through other fora such as in barazas, and other community gatherings and the media. The high risk of HIV infection for those with STI should be emphasised.
3. More emphasis should be placed on the need to have partners of STI clients treated even when asymptomatic. Clients should be encouraged to refer them at every encounter with a health care provider.
4. Interventions that focus on HCPs to improve STI case management especially in the area of providing clients with more information about STI, maintaining a regular supply of drugs and the procurement of instruments needed for performing physical examination such as speculums are required. This may be achieved through regular meetings with supervisors where issues affecting the care of patients are discussed and sorted out.
5. Planning for regular training of health workers should be done by supervisors to update them on current care practices and as a way of motivating them.
6. Information and education activities focusing on raising awareness among STI patients about the good quality provided at public care facilities should be intensified.
7. Further studies should be carried out to compare the use of different types of health facilities by STI clients.

## REFERENCES

1. **Allen-Helitzer D. and H. Allen 1996.** Targetted Intervention Research on STI. In: Practising anthropology; 18: 20-23
2. **Atawell K. and H. Grosskurth 1999.** HIV/AIDS in developing countries. In: From knowledge to practice- STD control and HIV prevention. 94-95
3. **Ayeni B, G. Ruston and M. McNulty 1987.** Improving the geographical accessibility of health care in rural areas. A Nigerian case study. Social Science and Medicine; 25: 1083-1094.
4. **Benjarattanaporn P, C. P. Lindau, S. Mills, J. Barclay, A. Bennett, D. Mugrditchian, J.S. Mandel, P. Pongswatanakulsiri and T. Warnissorn 1997.** Men with sexually transmitted diseases in Bangkok: where do they go for treatment and why? AIDS. Sept. 11; Suppl. 1: S87-95
5. **Byrum M., H. Jackson, M. Wijermars and V. C. Knight 1998.** How extensive are HIV/AIDS and STDs? In. Facing the challenges of HIV/AIDS/STDs: A gender based response. 3<sup>rd</sup> Ed. Kit and SAfAIDS. 4-6.
6. **Cohen B. and J. Trussel 1996.** Societal Context. In. Preventing and mitigating AIDS in Sub- Saharan Africa. National Academy Press, Washington D.C. 57-68
7. **Dadian J.M. 1996.** Public Health approaches to STD control-New challenges in the era of AIDS. CAPTIONS. FHI.; 2: 24-28
8. **Dehne K.K, R. Snow and K. R. O'Reily 2000.** Integration of services for STI with Family planning. Bulletin of World Health; 78: 628
9. **Devanter V. 1999.** Prevention of STDs: The need for behavioural science expertise in Public health departments. Editorial. American Journal of Public Health; 89: 815-817

10. **Donovan J. L. and D.R. Blake 1992.** Patient Non-compliance: Deviance or reasoned decision making? *Social Science and Medicine*; 34(5): 507-513.
11. **Evans C. and H. Lambert 1997.** Health seeking strategies and sexual health among female sexual workers in urban India. *Social Science and Medicine*; 44: 1794-1803.
12. **Faxelid E., B.M. Ahlberg and S. Freudenthal 1997.** Quality of STD care in Zambia. Impact of training in STD management. *International journal of quality in health care*. Oct.; 9(5): 361-366
13. **Field M. and G. Dallabetta 1997.** Integrating Reproductive health services. *CAPTIONS.FHI. IV.1*; 40-43
14. **Fishers A.A., J. E. Laing and J. W. Townsend 1998.** Handbook for Family planning Operations Research Design. 2<sup>nd</sup> Ed., Population. New York
15. **Fonck K., F. Bashir, J. Bwayo, L. Fransen and M. Temmerman 2001.** Syphilis control during pregnancy: effectiveness and sustainability of a decentralized program. *American Journal of Public Health*; 91: 705-707
16. **Garbase A.C., J. T. Rowley and E. T. Mertens 1998.** Global epidemiology of STDs. *Lancet*; 351(Suppl.III): 2-4
17. **Grosskurth H., F. Mosha and J. Todd 1995.** Impact of improved treatment of STDs on HIV infection in rural Tanzania: randomized clinical trial. *Lancet*; 346: 530- 536
18. **Hanson S., J. Engvall, R. M. Sunkutu, J. Kamanga, M. Mushanga and B. Hojer 1997.** Case management and patient reactions. A case study of STD care in a province in Zambia. *Intern. Journal of STDs and AIDS*; 8: 320-328
19. **Hayes R., H. Grosskurth and D. Mabey 1999.** Editorial. Interpretation of the Mwanza and Rakai STD trials. *Bull. WHO* 79:5; 482-483
20. **Henry K. 1995.** AIDSCAP seeks a private sector solution to the STD self-treatment dilemma. *CAPTIONS. FHI. 2*: 26-29.

21. **Kenya Demographic And Health Survey (KDHS) 1998.** National Council for Population and development. 39-45
22. **Komalafe O.O., J. Nkumba, M. Makoka, A. Makhaliva and P. Bonongwe 2000.** Sexually transmitted diseases at Queen Elizabeth Central Hospital, Blantyre, Malawi. E.A. Med. Journal; 77(12): 644-647
23. **Kroeger A. 1983.** Anthropological and socio-medical health care research in developing countries. Social Science and Medicine; 17: 147-161
24. **Laga M. 1994.** Epidemiology and Control of STDs in developing countries. In: Sexually Transmitted Diseases. Mar- April: 84-88.
25. **Makoul G. and S. Theo 1995.** Health promotion in Primary Care: Physician- patient communication and decision making about prescription medications. Social. Science and Medicine; 41(9): 1241-1245
26. **Mertens T.E. and M. Carael 1997.** Evaluation of HIV/STD prevention, care and support: an update on WHO's approaches. AIDS Education and Prevention. April; 9(2): 133-145
27. **Ministry of Finance and planning 2001.** Population and Housing Census (1999). Vol. 1. Central Bureau of Statistics. Republic of Kenya
28. **Ministry of Health 1999.** Strategic Plan for the Kenya National HIV/ AIDS & STDs Control Programme for 1999-2004. Republic of Kenya: 28-31
29. **Moses S., E. Ngugi, J. Bradley, E.K. Njeru, G. Eldridge, E. Muia, J. Olenja and F.A. Plummer 1994.** Health Care-seeking behaviour related to the transmission of sexually transmitted diseases in Kenya. American Journal of Public Health; 84:1947-1951.
30. **Moss W., M. Bentley and S. Maman 1999.** Effective strategies to control STIs. Voices from rural Kenya. AIDS Care; 11: 95-113.
31. **Ngugi E., F.A. Plummer, M. Mwongera, C. Kariuki and S. Moses 1993.** Decreased risky sexual behaviour following integrated health service and community based

- STD/AIDS intervention in Nairobi. Report presented at the ninth International Conference on AIDS.
32. **Nuwaha F. 2000.** Risk factors for recurrent Sexually transmitted diseases in Uganda. E.A. Med. Journal; 77(3): 138-142
  33. **O'Hara HB, H.A.C.M Voeten, A.G. Kuperus, J.M. Otido, J. Kusimba, J.D.F. Habbema, J.J. Bwayo and J.O. Ndinya-Achola 2000.** Quality of STD health education, Nairobi. AIDS Nov.
  34. **Ong I.M.L, J.C.M. De Haes, A.M. Hoos and F. B. Lammes 1995.** Doctor –patient communication: A review of Literature. Soc. Sci. Med. 40(7): 903-918
  35. **Over M. and P. Piot 1992.** HIV and STDs. In: Disease control priorities in developing countries. Editors: Jamison D. T., W.H. Mosley, A.R. Mesham and J. I Bobadila, New York: Oxford University Press for the World Bank
  36. **Oxaal Z. and S. Baden 1996.** Challenges to women's reproductive health: maternal mortality. In: Bridge Report; 28:19.
  37. **Philips D.R. 1990.** Using health services: In. Health and health care in third world. Longman Scientific and Technical. 179-222
  38. **Plescia M., S. Koontz and S. Laurent 2001.** Community assessment in a vertically integrated health care system. American Journal of Public Health; 91:811-814
  39. **UNAIDS 1996.** Management of sexually transmitted diseases. The Global programme on HIV/AIDS. WHO.Geneva.
  40. **UNAIDS 1997.** STDs; policies and principles for preventive care: WHO: Geneva. 14- 18
  41. **WHO 1997.** Reproductive Health Strategy for the African Region-1998-2007. Regional Office for Africa-AFR/RC47/8 pg 2-3
  42. **WHO 1991.** General Principles of STD control at PHC level. In: Management of patients with STDs. WHO Technical Report series, 810, WHO: 60-66

## CLIENT INTERVIEW

Date of Interview \_\_\_\_/\_\_\_\_/2000

Health Care Facility (HCF) CODE \_\_\_\_\_ Name of HCF \_\_\_\_\_

QUESTION NUMBER	CODING CATEGORY
<b>GENERAL CHARACTERISTICS</b>	
1. Age in years _____	
2. Sex	1. Male 2. Female
3. Educational level	1. Primary 2. Secondary 3. College/ university 4. None
4. Marital status	1. Single (never married) 2. Married/Cohabiting 3. Separated 4. Widowed 5. Others
5. Residence of client since last six months. _____	
6. What is the occupation of the client?	1. Unemployed 2. Housewife 3. Casual/unskilled 4. Business 5. Student 6. Others
7. Number of children _____	
<b>HEALTH SEEKING BEHAVIOUR</b>	
8. What disease is the client suffering from? (From card – confirm with client)	1. Genital ulcer disease 2. Urethral discharge 3. Vaginal discharge 4. PID

	5. Others
9. Is this the first time for you to have such a problem (disease) in the last one year?	1. Yes 2. No -----Go to Q 13
10. Is this the first time you are seeking treatment for the present disease episode?	1. Yes 2. No
11. If yes, when were symptoms first experienced?	1. Less than 1 week ago 2. 1-2 weeks ago 3. 3-4 weeks ago 4. 5 weeks or more
12. If yes, why did you choose to come to this facility?	1. I don't know any other 2. I was told by friends/ relatives 3. I was referred by a HCP 4. Referred from ante natal clinic 5. Others
13. If no to Q9& 10, where did you go for treatment those other times earlier on?	1. Private clinic/ hospital 2. Pharmacy 3. Same health facility 4. Other public facility 5. Others (specify)
14. Why did you choose to come to this facility this time?	1. Treatment is effective 2. It is cheaper 3. Others (specify)
15. Have you been given a date to return to the clinic?	1. Yes 2. No
16. If yes, are you going to keep to it?	1. Yes 2. No (probe) 3. I'm not sure
17. If your friend were to suffer from a similar disease where would you encourage him/ her to seek care?	1. Same HCF 2. Private HCF 3. Others

18. Give reasons for your answer.	<ol style="list-style-type: none"> <li>1. Good counseling/ education</li> <li>2. Treatment is effective</li> <li>3. Health care providers are qualified</li> <li>4. Others</li> </ol>
19. Were you told that it is important for your partner to be treated?	<ol style="list-style-type: none"> <li>1. Yes (probe if given card for partner)</li> <li>2. No</li> </ol>
20. If yes, are you going to encourage your partner to get treated?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. Not sure</li> </ol>
21. If yes, where would you recommend your partner to seek treatment?	<ol style="list-style-type: none"> <li>1. Same HCF</li> <li>2. Private HCF</li> <li>3. Others</li> </ol>
<b>QUALITY OF CASE MANAGEMENT</b>	
<b>Physical Examination</b>	
22. (For Females) Did the HCP examine you?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
23. If no, would you have liked to be examined?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. Not sure</li> </ol>
24. If examined, what did the HCP do?	<ol style="list-style-type: none"> <li>1. Looked at my private parts</li> <li>2. Used instruments</li> <li>3. Used hands to check me up</li> <li>4. Others</li> </ol>
25. How can you describe the HCP while examining you?	<ol style="list-style-type: none"> <li>1. Gentle</li> <li>2. Rough</li> <li>3. Patient</li> <li>4. Impatient</li> </ol>

<b>Counselling</b>	
26. Did the HCP tell you what problem you had?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
27. Did the provider explain how one can get the disease?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
28. Were you told how to protect yourself from catching similar infections?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
29. If yes, what are some of the ways mentioned by the provider?	<ol style="list-style-type: none"> <li>1. Faithfulness to one partner</li> <li>2. Abstinence</li> <li>3. Condoms</li> <li>4. Others</li> </ol>
30. If no, do you know of ways to protect yourself?	<ol style="list-style-type: none"> <li>1. Yes (probe)</li> <li>2. No</li> </ol>
31. Were you told about the risks or consequences of STI?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. Not sure</li> </ol>
32. If yes, which ones can you remember?	<ol style="list-style-type: none"> <li>1. Infertility</li> <li>2. Blindness in babies</li> <li>3. Mental confusion</li> <li>4. Death</li> <li>5. HIV/ AIDS</li> <li>6. Others</li> </ol>
33. If no, do you know of any?	<ol style="list-style-type: none"> <li>1. Yes (probe)</li> <li>2. No</li> </ol>
34. Do you know that a person can have STI and HIV at the same time?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. Not sure</li> </ol>
35. How do you feel about the information you obtained	<ol style="list-style-type: none"> <li>1. Adequate</li> <li>2. Undecided</li> </ol>

from the HCP about STI?	3. Inadequate
<b>Treatment</b>	
36. Did you obtain medicines?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. Some</li> </ol>
37. If no/ some what was the reason?	<ol style="list-style-type: none"> <li>1. Not available</li> <li>2. I do not have money</li> <li>3. Others</li> </ol>
38. Were you told about the importance of completing treatment?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
39. Were you told what to do while you are on treatment in regard to sexual behaviour?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
40. If yes, what were you told to do?	<ol style="list-style-type: none"> <li>1. Abstain from sex</li> <li>2. Use condom (probe if shown)</li> <li>3. Others</li> </ol>
41. Are you satisfied with the medications you received?	<ol style="list-style-type: none"> <li>1. Satisfied</li> <li>2. Undecided</li> <li>3. Dissatisfied</li> </ol>
42. If dissatisfied, please explain.	<ol style="list-style-type: none"> <li>1. No explanation given</li> <li>2. Given same treatment I got earlier</li> <li>3. No laboratory tests done</li> <li>4. Others</li> </ol>
43. Did you have any questions about the disease before or after the health worker attended you?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
44. If yes, were they answered?	<ol style="list-style-type: none"> <li>1. Yes (probe if prompted / volunteered to ask)</li> <li>2. No</li> </ol>

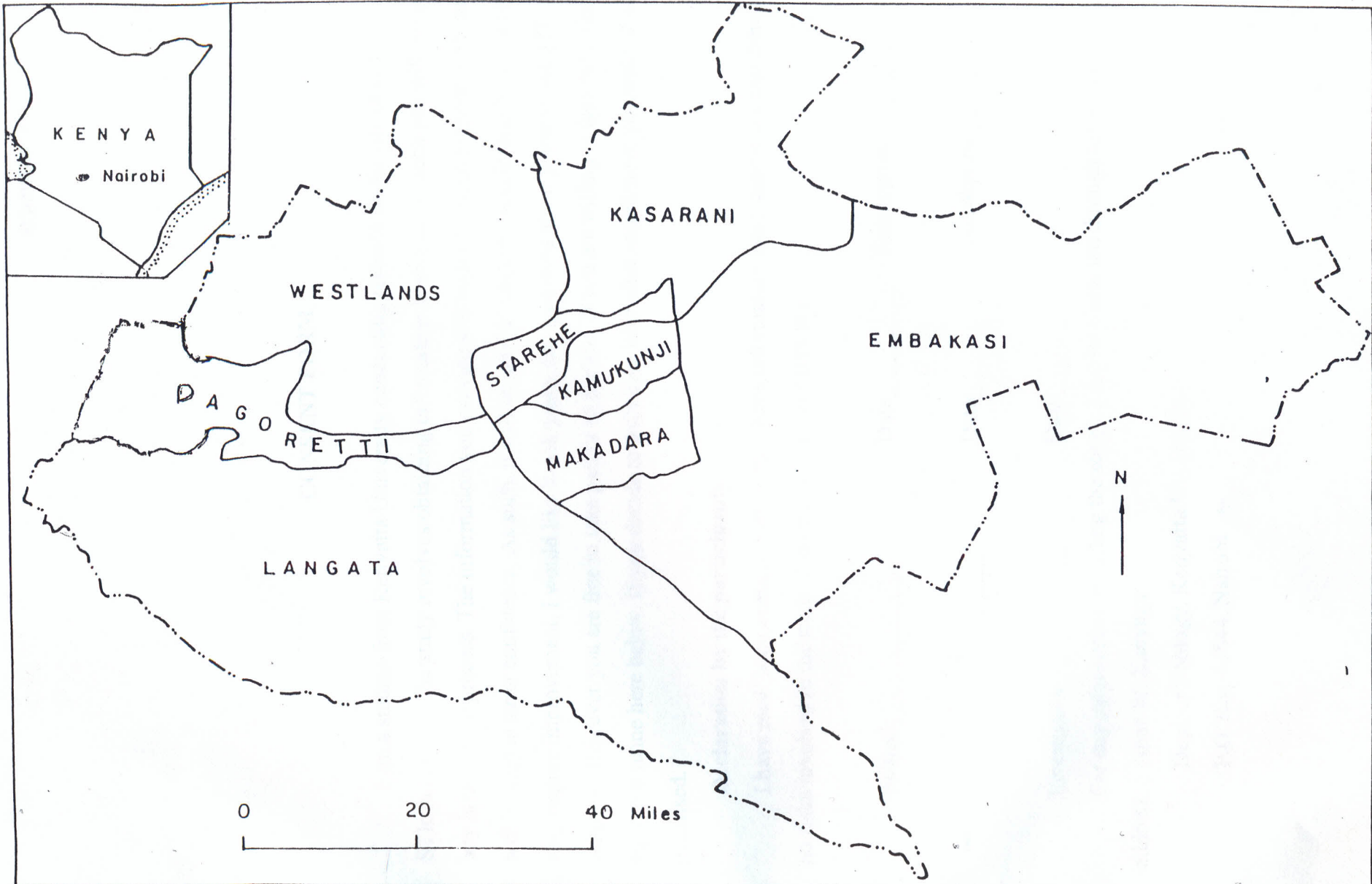
45. If not answered during the discussions, did you ask the HCP to tell you about them?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
46. If no, explain the reasons.	<ol style="list-style-type: none"> <li>1. H/worker was impatient</li> <li>2. Interrupted during consultations</li> <li>3. I forgot to ask</li> <li>4. Client felt / afraid</li> <li>5. Others</li> </ol>
<b>ORGANIZATIONAL FACTORS</b>	
47 How fast were you attended to after you arrived at the clinic?	<ol style="list-style-type: none"> <li>1. Up to ½ hour</li> <li>2. Between ½ hr - 1hr</li> <li>3. Between 1 – 1½hrs</li> <li>3. Between 1½ - 2hrs</li> <li>4. Between 2 - 2½ hrs</li> <li>5. Between 2½ - 3 hrs</li> </ol>
48. Are you happy with the time you waited?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No (probe)</li> </ol>
49. What do you think of treatment charges at this clinic?	<ol style="list-style-type: none"> <li>1. High</li> <li>2. Fair</li> <li>3. Low</li> </ol>
50. Do you feel comfortable coming to this clinic?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
51. If no, state the reasons-----	
52. What can you say about the quality of care provided to you?	<ol style="list-style-type: none"> <li>1. Good</li> <li>2. Fair</li> <li>3. Poor</li> </ol>

## HEALTH CARE PROVIDER (HCP) INTERVIEW

<b>Name of HCF</b> _____ <b>Date</b> ___/___/ 2000	<b>Code of HCF</b> _____
<b>QUESTION NUMBER</b>	<b>CODING CATEGORY</b>
<b>GENERAL INFORMATION</b>	
1. Sex of HCP	1. Male 2. Female
2. Profession of HCP	1. Doctor 2. Nurse 3. Clinical Officer 4. Others
3. In which year was the qualification obtained? _____	
4. Have you been trained in STI management?	1. Yes 2. No
5. If yes, in which year were you trained? _____	
6. Do you deal with patients other than STI clients?	1. Yes (probe) 2. No
7. How long have you worked with STI clients? ----- ---	
8. Are there other providers trained in STI management in this facility?	1. Yes 2. No
9. If yes do they provide STI care?	1. Yes (how often?) 2. No (Probe why they do not)
10. What can you say about the numbers of STI cases that attend this clinic?	1. Many 2. Fair number 3. Few
11. Are there times when patients are more than usual?	1. Yes (explain) 2. No

12. Do you examine all the clients you see?	<ol style="list-style-type: none"> <li>1. Usually</li> <li>2. Occasionally</li> <li>3. Rarely (probe)</li> </ol>
13. Do you have a regular supply of STI drugs?	<ol style="list-style-type: none"> <li>1. Always</li> <li>2. Sometimes</li> <li>3. Never</li> </ol>
14. Do you have STI drugs in the clinic at the moment?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. Some</li> </ol>
15. Do clients come for treatment during the periods when drugs are not available?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
16. Do clients usually feel comfortable to discuss their STI problems?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
17. If no, how do the HCPs deal with this problem? ----- -----	
18. Do you get enough time to educate (counsel) your clients?	<ol style="list-style-type: none"> <li>1. Usually</li> <li>2. Sometimes</li> <li>3. Rarely (probe)</li> </ol>
19. Do STI clients worry about other people getting to know their problems while at the clinic?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. I do not know</li> </ol>
20. If yes, how do you alley their fears? _____	
21. What are the main obstacles that clients face in the treatment and prevention of STI according to your experience? -----	
22. How do STI clients feel about the care provided to them? -----	
23. How do you feel about the care you provide to STI clients? -----	

NAIROBI PROVINCE



## CONSENT FORM

I am a student from Kenyatta University conducting research on the use of services for STIs in Nairobi. The study involves obtaining information from you. As such you will not suffer any injury in the process. The information you provide will be for research purposes only and will be kept in strict confidence. As such, it will be used to identify areas in health care, which may require improvement. I would like to ask you a few questions about yourself and STI services. However you are free to take part or to decline. If you are willing to take part, please sign your name here below. If you decide to withdraw later after recruitment, you will not be penalised.

### **Declaration by the participant:**

I have read/ been explained about the above information and I understand that there are no risks involved in the study. I have agreed to take part in it.

Subject \_\_\_\_\_ Date \_\_\_\_\_ Thumbprint \_\_\_\_\_

Witness \_\_\_\_\_ Date \_\_\_\_\_ Thumbprint \_\_\_\_\_

Investigator \_\_\_\_\_ Date \_\_\_\_\_

For any information regarding the study, I can be contacted through the following address: Anne W. Kanyuga

Dept. of Zoology, Kenyatta University,

P.O. Box 43844, Nairobi.

# CITY COUNCIL OF NAIROBI



CITY HALL  
P.O. Box 30108  
NAIROBI

MEDICAL OFFICER OF HEALTH  
TELEGRAM "MUNICIPALITY" NAIROBI  
TELEPHONE 224281 EXT. ....

## PUBLIC HEALTH DEPARTMENT

PHD/MOH/R.2 VOL.VI (2)

DATE 22ND SEPTEMBER, 2000.....

Ann W. Kanyuga  
Kenyatta University  
Department of Zoology  
P.O.Box 43844  
NAIROBI

LADY NORTHEY HOME
DIVISION II - PED
DATE RECEIVED <u>27/9/00</u>
NO <u>196/00</u>
FORWARDED TO <u>1 AMOH</u> <u>MD</u> <u>27/9/00</u>
2 SUPT
3 ASS-SUPT

RE: AUTHORITY TO CARRY OUT RESEARCH

I refer to your letter dated 21st September, 2000 requesting for authority to conduct a research in our health facilities.

Authority is granted for you to carry out research on "Factors Influencing the utilization of STI Services" in all relevant health facilities with effect from September, 2000.

However, you will be required to confine your research only to relevant health facilities. You are also required to submit a copy of your research to the Medical Officer of Health for perusal and retention. Your research activities should not disrupt the running of the facilities.

By a copy of this letter the Asst. Medical Officer of Health, Division I & II and Special Treatment Clinic are requested to accord you the necessary assistance.

*Forwarded  
MD AMOH  
27/9/00*

DR. EDWIN NYAURA  
FOR: MEDICAL OFFICER OF HEALTH

- c.c. Asst. Medical Officer of Health — Division I & II
- Asst. Medical Officer of Health — Special Treatment Clinic

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

Telegrams: "EDUCATION", Nairobi

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When replying please quote

Ref. No. MOEST 13/001/33C 58/2  
and date



JOGOO HOUSE "B"

HARAMBEE AVENUE

P.O. Box 30040-00100

NAIROBI

28th March, 2003

Anne W. Kanyuga  
Kenyatta University  
P.O. BOX 43844  
NAIROBI

Dear Sir

RE: RESEARCH AUTHORISATION

On the basis of your application for authority to conduct research on 'Utilization of services for sexually Transmitted infections (STI) in Nairobi, I am pleased to inform you that you have been authorised to conduct research in Nairobi for a period ending 30th August, 2003.

You are advised to report to the Provincial Commissioner, the Provincial Director of Education Nairobi, and the Provincial Medical Officer Nairobi before embarking on your research project. It is noted that the research is a requirement in partial fulfilment for the award of M.S.c . Degree in Public Health and Epidemiology by Kenyatta University.

Upon completion of your research project, you are expected to deposit two copies of your research report to this Office.

Yours faithfully

  
A. G. KAARIA  
FOR: PERMANENT SECRETARY/EDUCATION

CC  
The Provincial Commissioner  
Nairobi  
The Provincial Director of Education  
Nairobi  
The Provincial Medical Officer  
Nairobi

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