HEALTH SEEKING BEHAVIOUR FOR KEY SEXUALLY TRANSMITTED INFECTIONS AMONG THE FEMALE SEX WORKERS IN ELDORET MUNICIPALITY, UASIN-GISHU COUNTY, KENYA

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A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF PUBLIC HEALTH IN THE SCHOOL OF PUBLIC HEALTH OF KENYATTA UNIVERSITY

MAY, 2018
DECLARATION
This thesis is my original work and has not been presented for a degree in any other university.

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DEDICATION

This thesis is dedicated to my dear husband Peter Mutisya Musembi and beloved son Caleb Mwendwa Mutisya.
ACKNOWLEDGEMENTS

My sincere gratitude goes to God Almighty for granting me the opportunity to study, energy and above all good health. This work owes its existence and completion to very special people who accepted to help me out socially and academically. In a special way, I would wish to extend my sincere gratitude to my supervisors Dr. Keraka Margaret and Dr. Wanyoro Karanja for their guidance, advice and support to this research. Thanks to my fellow course mates and the entire staff of the Kenyatta University department of community health for the fruitful interactions during the course of my study.

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DEFINITION OF TERMS

Sex work; can be classified as either ‘formal’ (organized) or ‘informal’ (not organized) negotiations and performance of sexual services for remuneration or any other form of material gain (UNAIDS, 2012)

Sex workers; female, male and transgender adults and young people who receive money or goods in exchange for sexual services, either regularly or occasionally, and who may or may not consciously define those activities as income-generating (UNAIDS, 2012)

Sexually transmitted infections (STIs); these are diseases passed on from one person to another through unprotected sex (sex without a condom) or sometimes through genital contact (Casey et al., 2010)

Key Sexually Transmitted Infections; in this study key STIs included: Syphilis, Gonorrhoea, genital herpes and HIV/AIDS which commonly affect sexually active persons ((Ngugi, 2012). These are STIs in which the symptoms are common and can easily be detected by a person who is experiencing them apart from HIV which will be studied since it’s highly acquired if one has STIs.

Syphilis; is a highly contagious disease spread primarily by sexual activity, including oral and anal sex.

Genital Herpes; This is a sexually transmitted disease caused by a herpes virus. The disease is characterized by the formation of fluid-filled, painful blisters in the genital area. The blisters break and leave painful sores that may take two to four weeks to heal (Casey et al., 2010).
Gonorrhoea; This is a common bacterial sexually transmitted infection. In women the following might be noticed: an unusual vaginal discharge which may be thin or watery yellow or green, pain when passing urine, lower abdominal pain or tenderness (this is rare), bleeding between periods or heavier periods (including women who are using hormonal contraception)(Casey et al., 2010).
## LIST OF ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immuno Deficiency Syndrome</td>
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<tr>
<td>CSW</td>
<td>Commercial Sex Workers</td>
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<td>FSWs</td>
<td>Female Sex Workers</td>
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<td>HIV</td>
<td>Human Immuno-deficiency Virus</td>
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<td>HPV</td>
<td>Human Papilloma Virus</td>
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<tr>
<td>ICPD</td>
<td>International Conference on Population and Development</td>
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<td>KACP</td>
<td>Kenya AIDS Control Project</td>
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<td>KDHS</td>
<td>Kenya Demographic Health Survey</td>
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<tr>
<td>KM</td>
<td>Kilometers</td>
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<tr>
<td>KNBS</td>
<td>Kenya National Bureau of Statistics</td>
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<td>NACC</td>
<td>National AIDS Control Council</td>
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<td>NASCOP</td>
<td>National AIDS and STI Control Programme</td>
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<td>SW</td>
<td>Sex Worker</td>
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<td>SWOP</td>
<td>Sex Worker Outreach Programme</td>
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<td>SRH</td>
<td>Sexual and Reproductive Health</td>
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<td>RH</td>
<td>Reproductive Health</td>
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<td>RTI</td>
<td>Reproductive Tract Infections</td>
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<td>STIs</td>
<td>Sexually Transmitted Infections</td>
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<td>WHO</td>
<td>World Health Organization</td>
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Sexually transmitted infections (STIs) are being increasingly recognized as serious global health problem with impact on individual women and men, their families and communities. They can have severe consequences, including infertility, ectopic pregnancy, chronic pelvic pain, miscarriage, and increased risk of HIV transmission. STIs are the main preventable cause of infertility, particularly in women. The general objective of the study was to establish the determinants of health seeking behaviour among the female sex workers for key STIs in Eldoret Municipality in Uasin Gishu county, Kenya. The specific objectives were to examine the female sex workers’ knowledge of key STIs, to determine the healthcare seeking behaviour on key STIs among the female sex workers and to evaluate the determinants influencing health seeking behaviour for key STIs among the female sex workers. The sample size was 139 female sex workers who were selected through snowballing sampling technique. Data was collected using questionnaires, key informant interview schedule guide and Focused Group Discussions guide (FDGs). Data was analyzed using Statistical Package for Social Sciences (SPSS) version 22. Descriptive statistics was used to describe the variables. Hypothesis testing was done using chi-square and significance established at p ≤ 0.05. Binary logistic regression analysis was used to determine independent predictors of health seeking behaviour for key sexually transmitted infections. The study findings indicated that majority (66.2%) of FSWs had high knowledge level on STIs, majority (80.7%) of the FSWs had ever experienced STI symptoms though only (52.1%) of them sought for treatment. The main determinants for health seeking behaviour for STIs were; perceived health care providers attitude and behaviour ($\chi^2=66.617$, df=1, P=<0.001), distance to the health facility ($\chi^2=28.116$, df=1, P=<0.001), treatment cost ($\chi^2=41.707$, df=1, P=<0.001), average waiting time ($\chi^2=14.938$, df=1, P=<0.001), level of education ($\chi^2=6.802$, df=2, P=0.033), monthly income ($\chi^2=9.183$, df=3, P=0.027), number of years in sex work ($\chi^2=8.861$, df=3, p=0.031) and sex debut ($\chi^2=7.857$, df=2, p=0.020) according to chi-square test of significance. The main predictors of health seeking behaviour for key STI were; perceived health care providers attitude and behaviour (OR=63.278: (18.973-211.036) P=<0.001), distance to the health facility (OR=10.993: (4.186-28.869), P=<0.001), treatment cost (OR=18.462: (6.931-49.174), P=<0.001), average waiting time (OR=5.111: (2.165-12.067, P=<0.001), FSWs who had received a HIV test (OR=3.196: (1.389-7.352); p=0.001), educational level (OR=2.636: (1.060-6.560); p=0.037) and monthly income (OR=2.880: (1.052-7.882); p=0.030). The study concluded that there were several determinants to accessing healthcare services for STIs and they were related to both individual and structural factors. Thus, there is need for NASCOP to continuously sensitize healthcare workers on healthcare service provision to FSWS indiscriminately and in a friendly manner in order to reduce on the barriers of accessing STI services among the FSWs.
CHAPTER ONE: INTRODUCTION

1.1 Background to the study

More than 30 different bacteria, viruses and parasites are known to be transmitted through sexual contact. Symptoms or disease due to the incurable viral infections can be reduced or modified through treatment (World Health Organization, 2016). Common symptoms of STIs include vaginal discharge, urethral discharge, genital ulcers, and abdominal pain. For several decades, STIs have been ranked among the top five categories of diseases for which adults in developing countries seek health-care services (World Health Organization, 2012). Although in Northern and Western Europe there has been a spectacular decline in the incidence of STIs, particularly gonorrhea and syphilis, the situation in North America is more variable with increases continuing in inner-city minority populations (Behets, 2013). STIs are known to facilitate the acquisition and transmission of HIV. In many countries, STIs are among the top five conditions for which men and women seek care and thus constitute a considerable drain on resource-strapped health services (World Health Organization, 2012). According to WHO estimates, 448 million new cases of curable STIs (syphilis, gonorrhoea, chlamydia and trichomoniasis) occur annually throughout the world in adults aged 15-49 years. This does not include HIV and other STIs which continue to adversely affect the lives of individuals and communities worldwide (World Health Organization, 2012).
Female sex workers (FSWs) have, by the nature of their work, a multitude of sex partners and sexual contacts and are therefore more exposed to HIV and other sexually transmitted infections (STI). Sex work settings in low-resource countries are characterized most commonly by poverty, endemic violence, criminalization and repeated human rights violations (Baral et al., 2012). Risky occupational contexts and low community cohesion underlie risky behaviours such as infrequent condom use, anal sex and heavy episodic drinking (Scorgie et al., 2012). Few efforts have been made to mobilize FSWs and to involve them in service delivery, meaning that levels of empowerment and solidarity among these communities are low (Moore et al., 2014). Access to condoms and HIV prevention and care services, STI care, HIV testing services (HTS) and HIV treatment and care is further hampered by factors such as stigmatization and discrimination at the general health services, high mobility and unfamiliarity with the locally available services and unsuitable opening hours (Scorgie et al., 2013).

Female sex work is the most prominent type of sex work in Kenya (Nyagero et al., 2010). Female Sex Workers (FSWs) from low-income countries are being driven into this profession mainly by poverty. Women who engage in commercial sex in sub-Saharan Africa are at high personal risk of physical and sexual violence, unwanted pregnancy and acquisition of STIs (Behets, 2013). According to the (Gelmon et al., 2009), female sex workers and their clients contribute to 14% of the new HIV infections in Kenya compared to general population (5.6%). In addition, STI
prevalence among sex workers in low income countries often surpasses 50% and may reach 80–90% when chronic viral infections are included (Steen et al., 2009).

In Kenya, an estimated 6.9% of women nationally are said to have engaged in sex for money, gifts or favors (Kenya National Bureau of Statistics and ICF Macro, 2010). The number of sex workers in Kenya is estimated to be over 100,000. The high number of women who can be identified as female sex workers are young women who engage in transactional sex and at times in so called ‘part-time’ sex work (Kenya National Bureau of Statistics and ICF Macro, 2010).

A behavioral survey conducted in the year 2015 among 3351 FSWs in Kenya found that 22% reported that they were currently experiencing STI symptoms at the time of survey. In the three months preceding the survey 25% of FSWs were diagnosed with an STI and only 29 percent of FSWs underwent STI treatment. The FSWs also seemed to lack knowledge about STIs and many reported that they had received insufficient information related to STIs including HIV (National AIDS/STI Control Programme, 2016).

1.2 Problem statement

STI prevalence among sex workers in low income countries often surpasses 50% and may reach 80–90% when chronic viral infections are included (Steen et al., 2009). FSWs contribute to 33% of STI prevalence and 29.3% of HIV prevalence (which is
above the national HIV prevalence of 5.6%) in Kenya (NACC, 2014). FSWs STI prevalence rate in Eldoret is 24% (National AIDS/STI Control Programme, 2016). Sex workers face extremely high risk of sexually acquired infections with incidence rates as high as 17 per 100 person per months (Ngugi, 2012). Yet it is estimated that only 16% of sex workers in low and middle income countries have access to even basic HIV prevention services (UNAIDS, 2012). In addition, FSWs are often blamed for poor healthcare seeking behavior; IBBS study conducted in Kenya in 2015 indicates that only 53% of the FSWs had ever visited a health facility. A review of patients’ clinical records at Hope World Wide Kenya Centre in Eldoret from January to December 2014 showed that more than 80% had had STI symptoms for a week or more before seeking treatment (Kavoi et al., 2014). Delays in seeking and obtaining diagnosis and treatment can allow for continued transmission and a greater probability of developing of adverse sequelae (WHO, 2011). NACC (2014), has recognized the fact that FSWs also experience barriers that limits access to health and social services because some of their behaviour and/or practices are both criminalized and stigmatized in society making them marginalized and hard to reach (NACC, 2014).

STIs can have serious consequences beyond the immediate impact of the infection itself. Herpes and syphilis can increase the risk of HIV acquisition three-fold or more. Mother-to-child transmission of STIs can result in stillbirth, neonatal death, low-birth-weight and prematurity, sepsis, pneumonia, neonatal conjunctivitis, and congenital deformities (Newman et al., 2013). Over 900,000 pregnant women were infected with
syphilis resulting in approximately 350,000 adverse birth outcomes including stillbirth in 2012 (Newman et al., 2013). Gonorrhoea is major causes of pelvic inflammatory disease (PID) and infertility in women (World Health Organization, 2016).

STIs constitute a huge health and economic burden for developing countries where 75–85% of the estimated 340 million annual new cases of curable STIs occur in developing countries, and STIs account for 17% economic losses because of ill health. Economic consequences are already apparent. In highly affected countries, the business sector is experiencing increased absenteeism as employees fall ill, care for the sick or attend funerals. Loss of experienced and skilled workers in the formal and informal sectors may lead to lower productivity, savings and investments. In subsistence and small-scale agriculture, loss of labour may result in changes in farming patterns and food shortages (Karim, 2010).

1.3 Justification of the study

Sex work carries occupational risks, not least of which is frequent exposure to sexually transmitted infections (STIs). According to report by World Health Organization (2011), the key STIs are common in most of the countries especially among the sexually active persons. Sex workers, once infected, can transmit STIs and HIV to a far larger number of susceptible clients, who serve as efficient “bridge” groups for even wider transmission (Vander, 2011). Utilization of healthcare services for STIs among the FSWs in Kenya has received limited attention and is not well documented. Understanding how FSWs seek healthcare for STIs and factors determining their
health care seeking behaviour might provide information that will help in designing or improving on appropriate FSWs intervention.

The study aimed at describing healthcare seeking behaviour and barriers to accessing STI services among female sex workers (FSWs) in Eldoret Municipality. The study area was selected since it’s among the towns with high FSWs size estimates, long distance trucks are parked there as a stop-over and it’s a major transit point to Uganda through Malaba frequented by heavy commercial drivers who lure women into sex work due to high circulation of cash.

1.4 Research questions

1. What is the female sex workers’ knowledge of key sexually transmitted infections?

2. What is the female sex workers’ health seeking behavior for key STIs?

3. What are the determinants of health seeking behavior for key STIs among female sex workers?
1.5 Hypothesis

1.5.1 Null Hypothesis

Healthcare seeking behaviour for key STIs among FSWs is not determined by knowledge, sexual behaviour, socio-economic and health system determinants.

1.6 Research objectives

1.6.1 Broad objective

To establish the determinants of health seeking behaviour among the female sex workers for key STIs in Eldoret Municipality in Uasin Gishu county.

1.6.2 Specific objectives

1. To examine the female sex workers’ knowledge of key STIs

2. To determine the healthcare seeking behaviour on key STIs among the female sex workers.

3. To evaluate the determinants influencing health seeking behaviour for key STIs among the female sex workers.

1.7 Significance of the study

The study findings will guide persons in different positions to design effective strategies towards improved health care services for female sex workers. The findings from this study will also add to the body of knowledge on differentials in key STIs health seeking behaviour among female sex workers.
1.8 Delimitation and limitation

1.8.1 Delimitation

The study looked at the key STIs such as Syphilis, Gonorrhoea, genital herpes and HIV/AIDS. The study population was drawn from the FSWs engaging in sex for money within Eldoret Municipality.

1.8.2 Limitation

Data was collected from female sex workers who were available on the days of interview. Due to legal reason for consent, FSWs under the age of 18 years were not interviewed.

1.9 Assumptions of the study

The study assumed that FSWs will accept to participate in the study and the information provided to the researcher was true.
1.10 Conceptual framework

The conceptual framework identifies the FSW characteristics, FSWs sexual behavior, socio-economic and health care systems as determinants of health seeking behaviour for key STIs among the FSWs.

Source: Adopted and modified from Glanz et al., 2009

Figure 1:1 Conceptual Framework
CHAPTER TWO: LITERATURE REVIEW

2.1 Sex work globally

Sex work takes place in a wide variety of settings. These range from well-established brothel based areas to a looser collection of venues such as bars, hotels or roadside areas. These can be classified as either “formal” (organized in establishments) or “informal” (UNAIDS, 2012). Where sex work is more formal and establishment based, managers or controllers may act as clearly defined authorities and as intermediaries between the sex worker and client. Informal sex workers such as those who work on the streets or from home may be more difficult to reach and at greater risk for violence. Stakeholders in the sex work industry include female, male or transgender sex workers, clients and sexual partners, business owners and managers or other intermediaries (Csete et al., 2010).

2.2 Sex work in Africa

In Africa, sex work takes all of the above forms, though not typically in the large-scale brothels that are common in Asia (Sloan et al., 2012). Sex work predominately occurs without intermediaries or associated gatekeepers. There may be contracts between sex workers and intermediaries, which stipulate what portion of the sex work fee is ceded to the venue owners. Where sex work is illegal, as in most of sub-Saharan Africa, these contracts are not enforceable by law (Schwandt, 2013). Where brothel-based sex work occurs in Africa, sex workers tend to operate without managers; instead, they accept money directly from the client. Even though sex workers must pay
brothel owners rent for use of the property, receiving payment directly from clients may allow sex workers more control of their finances and the number of clients they accept (Schmid, 2013).

2.3 Kenya Situation on sex work

Sex work in Kenya is illegal and this has resulted in the marginalization of sex workers along with the creation of stigma and discrimination. Female sex workers (FSWs) are frequently arrested and taken to court. Not only is sex work difficult to prove, but when male clients are found in the company of the FSWs they are rarely arrested (Ngugi, 2012). At the same time, lack of any legal rights puts sex workers at an increased risk of violence from both clients and law-enforcement officers. In a survey conducted of 475 female sex workers (FSWs) in four rural towns and three Nairobi townships, 17% reported having been assaulted and 35% raped by their clients (Elmore et al., 2010). In a similar study done in 2009, of 147 FSWs in the town of Meru north of Nairobi, 29.3% of participants reported forced sexual intercourse within the previous six months (Schwandt, 2013). It is also important to recognize that sex workers have little control over the nature of their sexual transactions. They are often subject to the demands of their clients or brothel managers, and are in a poor position to negotiate safe sexual practices such as the use of condoms and lubricants. For example, in the same survey in Meru, 40.8% of the participants reported having practiced anal intercourse and 96.6% of the time, the practice was initiated by their clients. Only 45.0% reported consistent condom use during anal intercourse, and 26.7% reported never using condoms (Schwandt, 2013). These statistics are significant as the
probability of HIV transmission during anal intercourse has been shown to be ten times higher than during vaginal intercourse. Overall, these conditions have led to their disempowerment and low levels of self-esteem among the FSWs (Royce, 2007).

2.4 The Global perspective of the STIs

For several decades, STIs have been ranked among the top five categories of diseases for which adults in developing countries seek health-care services (Rachna, 2014). Although in Northern and Western Europe there has been a spectacular decline in the incidence of STIs, particularly gonorrhea and syphilis, the situation in North America is more variable with increases continuing in inner-city minority populations (Behets, 2013). STIs are known to facilitate the acquisition and transmission of HIV. The World Health Organisation estimates that each year, there are over 340 million new cases of curable STIs (gonorrhoea, chlamydial infection, syphilis, and trichomoniasis), 75–85% of them in developing countries (World Health Organization, 2012).

2.5 African perspective of STIs

Sexually transmitted infections (STIs) constitute an important public health problem in Africa for the following reasons: STIs are frequent with high prevalence and incidence, STIs can result in serious complications and sequelae, STIs have social and economic consequences and a number of STIs have been identified as facilitating the spread of HIV (Mayaud et al., 2010).

STIs impose an enormous burden of morbidity and mortality in developing countries, both directly through their impact on reproductive and child health, and indirectly
through their role in facilitating the sexual transmission of HIV infection. The high prevalence of STIs has contributed to the disproportionately high HIV incidence and prevalence in Africa. Conversely, HIV may have contributed to some extent to STI increase, especially of viral infection such as herpes simplex virus or human papillomaviruses. The greatest impact is on women and infants. The World Bank has estimated that STIs, excluding HIV, are the second commonest cause of healthy life years lost by women in the 15–49 age groups in Africa, responsible for some 17% of the total burden of disease (World Bank, 2013).

Africa has the highest prevalence and incidence rates of STIs. The overall yearly incidence rate of curable STIs in Africa is estimated at 254 per 1000 people in reproductive ages (15–49 years), but is only 77–91 per 1000 in industrialised countries (Gerbase et al., 2014).

**2.6 A Kenyan perspective on the STIs**

Sexually Transmitted Infections (STIs) remain one of the leading causes of disease burden in Kenya (NACC, 2014). STIs have also been shown to have a link with increased vulnerability to HIV infection. In Kenya, the national HIV prevalence has decreased from a high of 14% in the mid-1990s to 5.6% in 2014 while HIV prevalence among the FSWs is at 29.3% (NACC, 2014). Out of the 1.3 million persons presently with HIV, 740,000 (56%) are women (UNAIDS, 2012).
STIs is present a major burden of disease in Kenya’s population. STIs are among the most important causes of maternal and infant morbidity and mortality. Serious complications attributable to STIs include ectopic pregnancy, pelvic inflammatory disease, preterm labour, pregnancy loss, congenital infection, infertility, genital cancer and AIDS. Recent evidence from NACC(2014), revealed that the presence of an untreated STI, increases the risk of transmission of HIV during unprotected sex between an HIV-infected and an HIV-uninfected partner. STIs that cause genital ulcers, such as syphilis, HSV2 and chancroid, are most associated with increased risk of transmission. In Kenya, due to the increased risk of transmission and acquisition of HIV in the presence of STIs, the continued monitoring of genital ulcers and abnormal genital discharge, is recommended to be part of the normal surveillance of HIV trends in the country.

Although STIs remain one of the leading causes of the disease burden in Kenya, the focus on HIV/AIDS in the last 10-15 years has overshadowed the predominance of STIs (NACC, 2014). NACC(2014), also showed that, the prevalence of STI was 0.5% among persons with zero or only one lifetime sexual partner compared with 1.0% among persons who had more than one lifetime sexual partner.

FSWs contribute to 33% of STI prevalence and 29.3% of HIV prevalence (which is above the national HIV prevalence of 5.6%) in Kenya. According Polling Booth Survey Report conducted in 2015, 22% of FSWs were experiencing an STI symptom at the time
of the survey. Meru reported the highest proportion of FSWs experiencing symptoms at 39% while Eldoret reported STI prevalence of 24%. Overall, in the three months preceding the survey 25% of FSWs were diagnosed with an STI and only 29% of FSWs underwent STI treatment (National AIDS/STI Control Programme, 2016).

2.7 Complications of the STIs

Complications and consequences of STIs often exist without symptoms. In women with gonococcal and chlamydial infections there may be no symptoms in up to 70% of cases (Sloan et al., 2012). Both symptomatic and asymptomatic infections can lead to the development of serious complications. The most serious complications and sequelae (long-term consequences) of untreated STIs tend to be in women and newborn babies (Kaye, 2010). These can include cervical cancer, pelvic inflammatory disease, chronic pelvic pain, fetal wastage, ectopic pregnancy and related maternal mortality (Delvaux et al., 2009). Chlamydial infections and gonorrhoea are important causes of infertility, particularly in women, with far-reaching social consequences (Sloan et al., 2012). Congenital syphilis is an important and significant cause of infant morbidity and mortality (Hawkes et al., 2008). In adults, syphilis can cause serious cardiac, neurological and other consequences, which can ultimately be fatal (Morris et al., 2006).
2.8 Burden of STIs among sex workers

Among most-at-risk populations (MARPs), female sex workers (FSWs) and their clients account for 14 percent of new HIV infections in Kenya. In addition, FSWs contribute to 33% of STI prevalence in Kenya. FSWs’ high incidence of HIV and STIs is a result of their high-risk sexual behaviour such as unprotected sex, frequency and number of sexual clients, anal intercourse, dry sex, and substance use (National AIDS/STD Control Programme, 2010). Sex workers in general not only have a higher risk of transmitting and acquiring HIV and STIs than the general population, but also are hard-to-reach members of society (World Health Organization, 2012).

When sex work is characterized by high rates of client change and unprotected sex, it is associated with high rates of HIV and other STIs (Saphonn, 2008). In some settings, 10% or more of the female sex workers have an active genital ulcer and over 30% have reactive syphilis serology (Behets, 2013). Gonorrhea and chlamydial infection may be found in a third or more of sex workers and many women have multiple infections (Behets, 2013). An STI in either the client or the sex worker or in both sexual partner facilitates the transmission of HIV (World Health Organization, 2011).

2.9 Control of STIs and prevention of HIV transmission

Control of sexually transmitted infections (STIs) is feasible and leads to improved sexual and reproductive health and contributes to preventing HIV transmission (Riedner, 2010). The chronic stage of HIV/AIDS is facilitated by poor STI control, particularly ulcerative STIs (Stadler et al., 2006). Several countries that have
successfully controlled STIs have documented stabilization or reversal of their HIV epidemics (Stadler et al., 2006). STI control is a public health outcome measured by reduced incidence and prevalence. The control methods include; targeting and outreach to populations at greatest risk, promoting and providing condoms and other means of prevention, effective clinical interventions, an enabling environment; and reliable data (Hayes et al., 2010). Clinical services include STI case management, screening and management of STIs in sex partners. Syndromic case management is effective for most symptomatic curable STIs and screening strategies exist to detect some asymptomatic infections. Presumptive epidemiologic treatment of sex partners and sex workers complement efforts to interrupt transmission and reduce prevalence (Riedner, 2010). Clinical services alone are insufficient for control of STIs since many people with STIs do not attend clinics. Outreach and peer education have been effectively used to reach such populations (Mehret, 2009). STI control requires effective interventions with core populations whose rates of partner change are high enough to sustain transmission. Effective, appropriate targeting is thus necessary and often sufficient to reduce prevalence in the general population. Such efforts are most effective when combined with structural interventions to ensure an enabling environment for prevention. Reliable surveillance and related data are critical for designing and evaluating interventions and for assessing control efforts (Karim, 2010).

2.10 FSWs Health seeking behaviour

A behavioural survey conducted in Laos in 2009 among 912 FSWs found out that 31% reported that they had experienced STI symptoms in the past three months
(Phrasisombath et al., 2012). The second HIV surveillance and STIs periodic prevalence survey conducted in Laos in showed that 43% and 61% of FSWs had reported STI symptoms in the past 12 months in Vientiane (the capital of Laos) and in Savannakhet province, respectively (Center for HIV/AIDS/STI, 2009). In addition, study findings by Phrasisombath et al., (2012) indicated that majority of respondents (86.7%) reported having STI symptoms in the past three months. Among respondents who reported current STI symptoms, 76.2% reported having abnormal discharge, 56.3% lower abdominal pain, and 50.9% genital itching.

Study conducted in Laos found out that FSWs seemed to lack knowledge about STIs and many reported that they had received insufficient information related to STIs including HIV. Access to and availability of good quality STI services is still relatively limited in Laos, especially in rural areas. In the same study from Laos, HCPs, especially in rural areas, reported inadequate knowledge and competencies regarding management of reproductive tract infections (RTIs), including STIs (Phrasisombath et al., 2012). Owing to the lack of STI clinics and clinical STI specialists, patients with STIs are mainly seen by gynecologists or general health practitioners, often with low competencies in STI management. In addition, self-medication for RTIs including STIs through private pharmacies is common among FSWs in Laos (Phrasisombath et al., 2012).

From another study conducted in Nepal on the FSWs’ treatment-seeking behaviour for STIs, 104 FSWs (24%) had never visited health facilities and another 25 FSWs (6%) also did not visit health facilities thinking that they did not require treatment for STIs.
These FSWs were thus non-utilisers of the available sexual and reproductive health services. Of the 296 FSWs who self-reported they visited health facilities, 72% visited NGO clinics, 50% private clinics, 27% hospitals and 13% health centres for the treatment of STIs (Ghimire et al., 2009). Most FSWs interviewed opted to visit private clinics when they needed health care because of greater trust, especially in terms of maintaining privacy and confidentiality. In addition, private clinics were perceived to have better quality health care services and shorter waiting times. However, FSWs felt that they were charged more because of a perception by doctors that FSWs earn a lot of money (Ghimire et al., 2009).

From the integrated biological and behavioral study (IBBS) conducted in Kenya in 2010, almost a third (32.1%) of the FSW reported having genital discharge in the past year and 4.5% reported an ulcer or sore in the same time period. Of those who reported seeking treatment, the majority went to public hospital (71.4%), a quarter at a private clinic (24.5%), and only a small minority at a private pharmacy (7.1%). However, none of those who had an ulcer or discharge told their partners, stopped having sex, or used a condom while having sex (Kriitmaa, 2011). A study conducted in Ethiopia by (Kurtz et al. (2011), reported that over 80% of patients seeking STI treatment having had symptoms for over a week, with 40% already on some form of treatment.
2.11 Determinants of health seeking behaviour for key STIs among FSWs

2.11.1 FSWs’ sexual behavior determinants

Health knowledge is poor among the female sex workers (FSWs) and that their health care seeking behaviour is neither informed nor scientific (Kalla et al., 2007). This is coupled up by many risk factors including inconsistent condom use, presence of work-related violence, young age and presence of non-paying sexual clients. In addition, years of engaging in commercial sex work has been associated with frequent acquisition of STIs (Behets, 2007). From the IBBS, majority of respondents (93%) first had vaginal sex when they were between the ages of 5 to 14 years old while 61.7% were between the age of 15 and 19 when they first had anal sex and 71.3% in the same age bracket had given oral sex. Almost all respondents had more than two sexual partners in the past week (92.6%), and 84% had more than ten sexual partners in the past month. The average number of sex partners in the past week and month was 5.2 and 21.6, respectively (Kriitmaa, 2011).

Previous studies have identified various determinants of behaviour change among FSWs. For example, a study by Solomon et al., (2008) identified knowledge and awareness of STIs especially HIV/AIDS, perceived vulnerability, perceptions of outcomes including costs and benefits of condom use, social support, peer group comparison condom and use self-efficacy as key factors responsible for behaviour change among FSWs in India. Another study by Chiao et al., (2010) reported population characteristics such as place of residence in the last two years, age,
educational level and marital status as being important in determining the level of
behaviour change.

Female sex work in Kenya is characterized by high risk in terms of the number of
sexual partners, the frequency of sexual acts, sexual concurrency, and low condom
use. However, there is wide diversity in sex workers’ number of sexual partners and
risk behavior. Client estimates are limited, but analysis based on the Kenya
Demographic Health Survey 2014 estimated that 15 percent of sexually active Kenyan
men aged between 15 and 49 years have sex with sex workers. Studies conducted
along the Mombasa-Nairobi highway, in Mombasa, and in Nyanza show great
variations in the numbers of partners per month, from 1 to 79, and the number of sexual
encounters ranged from 3 to 192 (National AIDS/STI Control Programme, 2016).

2.11.2 Socio-Economic determinants

The socio-economic conditions, in which people are born, grow, live and work, have
a significant influence on health. People from the poorest neighbourhoods can expect
to live, on average, seven years less than those from the richest neighbourhoods
(Marmot Review Team, 2010). The range of factors listed in the paragraph above, in
which issues like poverty, housing and poor education play a major role, interact to
shape the health and well-being of sex workers. Many sex workers, like other
vulnerable people, experience a syndemic, where social problems, such as poverty,
vioence and homelessness, combine to negatively impact on health in a way that is
more severe than if they were afflicted by just a single social problem. Whilst there
has been no comprehensive research into the impact of these conditions on sex worker health, the poor socio-economic conditions of many sex workers, detailed in the literature, suggest that health and life expectancy among this group is likely to be extremely poor, even without consideration of the adverse health consequences of sex work (Alessandra, 2007).

According to a study, factors significantly associated with self-medication included age, living alone, other income besides sex work, number of clients, duration of sex work, current STI, and knowledge of STI. For instance, the place of work is also presumably associated with the income from sex work, the number of clients, and with alternative sources of income separate from sex work. Increased duration in sex work could lead to more knowledge about STI and more awareness of where to access healthcare, thus being related to age and ultimately in their effect on self-medication (Gomez et al., 2010).

The low and uncertain incomes of sex workers along with the social stigma attached to their occupation also frequently limit their access to, social and health-care services. Even if healthcare is available, sex workers may not be able to protect their health because of lack of knowledge, low self-esteem, fear of discrimination, the burden of traditional household duties, the opportunity cost of time away from work, or the inability to cover transportation costs (Moses, 2007).
2.11.3 Health Care Systems determinants

Sexual and reproductive health services for sex workers are very limited. As many STIs are asymptomatic, both sex workers and health care providers often do not recognize the need for examination and treatment. Many health care providers are not able, or are unwilling to diagnose oral and ano-rectal STIs in female, male and transgender sex workers. In some countries, STI and HIV testing is mandatory for sex workers and confidentiality is not assured and judgmental attitudes of healthcare providers (HCPs). This has led to discrimination, loss of livelihood and even violence among the FSWs (Nalangan et al., 2011).

Other barriers to health care utilization is sometimes the cost of services, as was evidenced in Nairobi, Kenya: when user fees were introduced, a huge decrease in monthly attendances of the largest STI clinic in the city was recorded. Lifting of the fees a few months later resulted in increased attendances, although this never reached the same levels (Mayaud et al., 2010).

Some health facilities are operational during the day and at that time sex workers may be asleep, therefore, they may not seek STIs services from professionals in health facilities and may opt to seek medicines and services from chemists which are opened late into the night or not seek treatment at all (Mayaud et al., 2010).

Results from another study conducted in Laos suggested that the main barriers to seeking health care among FSWs with STI symptoms were both structural (e.g. travel costs, clinic opening hours, and social stigma) and individual (e.g. fear of social
discrimination and clinicians’ negative attitudes). Seeking testing and treatment for STIs is also hampered by negative attitudes of HCPs, particularly for FSWs. In Vietnam, FSWs seek treatment from private pharmacies and their decision to seek care is compromised by high costs, long waiting time, and judgmental attitudes of HCPs (Phrasisombath et al., 2012). Additionally, in study conducted in Nepal FSWs perceived inappropriate clinic opening hours, poor communication with care providers, discrimination, lack of confidentiality and fear of public exposure as barriers to accessing and using health services (Kurtz et al. 2011).

Study results from Nepal reported that a FSW shared her experience in visiting government health facilities for sexual health problems where she had to stay in line for three to six hours to get a ticket before seeing a doctor. During registration she had to disclose her symptoms in front of all the other people in the line, which she found humiliating and discriminatory. Other FSWs complained that they could not afford to wait so long in line for treatment (Kurtz et al. 2011).

Although 238 respondents had sought care for STI symptoms from a study conducted in Laos, 38% (n = 90) still reported barriers to accessing the services, mainly long clinic waiting time (67%) and inconvenient location of the clinic (31%). Judgmental attitudes of HCPs and very bureaucratic procedures to use the services were mentioned by ten and nine percent respectively. The main barriers mentioned by those who reported symptoms of STI (n = 115) in the last three months but had not sought care
were inconvenient location of the clinic (50%), not knowing where they could get the service needed (25%), and long waiting time at the clinic (20%). In addition, lack of money and lack of time to visit the clinic were reported by almost one-fifth of those who did not seek STI treatment. Some respondents provided spontaneous comments about HCPs' attitudes, reporting that they 'look down on me', 'behave badly towards me', and 'present an unwilling attitude' (Phrasisombath et al., 2012).
CHAPTER THREE: MATERIALS AND METHODS

3.1 Introduction

This chapter describes the research methodology and instruments that were used to conduct the research study.

3.2 Study design

A descriptive cross-sectional study design was used to examine the association between health seeking behaviour for key sexually transmitted infections (STIs) among the female sex workers (FSWs) and factors that influence it. This study design was chosen because it enables one to observe, describe and document aspects of a situation as it naturally occurs in a given population, which was the main aim of this study.

3.3 Study variables

3.3.1 Independent variables

The independent variables in this study included FSWs’ knowledge level, FSWs sexual behaviour, socio-demographic, socio-economic and health care system determinants of health seeking behaviour for STIs among the FSWs.

3.3.2 Dependent variable

The dependent variable was the healthcare seeking behaviour for treatment of key STIs on onset of symptoms among the FSWs.
3.4 Study area

3.4.1 Eldoret Municipality in Uasin Gishu County

The study was conducted in Eldoret Municipality which is in Uasin Gishu County. It is located about 300km North West of Nairobi on the Trans – African Highway. It is also the administrative centre of Eldoret West, East and Wareng (formally Uasin Gishu). The point estimate for Eldoret was estimated to be 21,929 (lower: 18,524, upper: 28,892) female sex workers (Odek et al., 2014). According to the Odek et al., (2014) report, the female sex workers’ population size estimates in Eldoret is 10%.

3.5 Target population

The target population was FSWs at Eldoret Municipality in Uasin Gishu County aged 18 years and above. Due to the nature of FSW’s work, the study targeted FSWs who operated at night which is the high peak time. The respondents were drawn from sex worker’s hotspots.

3.5.1 Inclusion criteria

Female Sex workers engaging in sexual services for money and are aged 18 years and above, FSWs who gave consent, FSW who were willing to secure ample time to participate in a focus group discussion
3.5.2 Exclusion criteria

Female sex workers under the influence of drugs or alcohol, FSWs who didn’t consent and FSWs who were not active in sex work for 1 month prior to interview

3.6 Sampling techniques and sample size determination

3.6.1 Sampling technique

Female sex workers are hard-to-reach and hidden populations, therefore snowball sampling technique was used to identify the respondents. To identify the first respondent, the researcher contacted one institution that offer services to female sex workers who then linked the researcher to two peer educators who later introduced the researcher to the respondents in their hotspots. Due to the nature of FSWs’ work, data collection was conducted at night since that’s the time most of the respondents were available. On average five respondents were interviewed per night which led to the study being carried out for one month. To prevent repeat interview, a screening question was asked on whether the FSW had been interviewed within one month on issues of STIs prior to the interview. One on one interviews were conducted in a place where the respondents were comfortable in order to openly discuss and respond to the interview questions. The interviews lasted approximately 35-40 minutes
### 3.6.2 Sample size determination

The desired sample size was determined using a Fisher *et al.*, (2003) formula for a population of less than 10,000 as shown below:

\[ N = \frac{Z^2pqD}{d^2} \]

Where:
- \( N \) is the desired sample size,
- \( Z \) standard normal deviation 1.96, which corresponds to 95% confidence level,
- \( P \) is the proportion of the target population estimated to have the desired characteristics, (corresponds to 10% FSW Population Size Consensus Estimates for Eldoret town, *(Odek et al., 2014)*,
- \( q \) = 1.0 - \( p \),
- \( d \) is the degrees of freedom, 0.05,
- \( D \) design effect=1

NACC (2014), identifies female sex workers (FSW) as a special vulnerable group. According to the Odek et al., (2014) report, the female sex workers population size estimates in Eldoret town is 10%. 

\[ q = 1.0 - p, \]
\[ d = 0.05, \]
\[ D = 1 \]

Hence, the desired sample size (n) was calculated as below:

\[ N = \frac{(1.96)(1.96)(0.10)(1-0.10)(1)}{(0.05)(0.05)} \]
= 138.3 =139

n= 138.3 which is approximately 139 people.

3.7 Research instruments

Semi-structured questionnaire was used for interviewing the participants. Key Informant Interview schedule was used to carry out in-depth interviews on eight respondents who included sex worker peer leaders, health care workers, project coordinators/managers supporting or involved in sex work projects in their offices and restaurants. Seven focused group discussions (FGDs) were conducted for female sex workers each with a range of 8-12 participants. The number of FGDs were representation of 50% of the respondents. Both interview schedule and FGD guides were developed thematically based on study objectives and literature review.

3.8 Pre-test of research instruments

Research instruments were pre-tested in hotspots within Burnt Forest town which had similar characteristics to the study area of interest to ensure that the tools collected the intended information (validity) and that they consistently measured the variables in the study (reliability). After the pre-test, study tools were reviewed and adopted for the study.
3.8.1 Validity

Validity was maintained by carrying out pre-test of 14 research instruments in Burnt forest in Uasin Gishu County. The questions were standardized during the pre-test to establish their accuracy in generation of required information.

3.8.2 Reliability

To ensure reliability, the research assistants were trained on the overall purpose and procedures of the study, the study questionnaire, focus group discussions and the key informant interview guides. The research assistants were also trained on how to use the recorders used for recording key informant interviews and focus group discussions. Interviewers submitted completed instruments to the investigator at the end of each working day. The data was then checked for accuracy, consistency and completeness and entered into Statistical Package for Social Scientists (SPSS) version 22 on a daily basis. Proof reading was done by research assistants on qualitative data after transcription in order to get accurate final transcripts.

3.9 Data Collection Techniques

Structured administered questionnaire, focused group discussions and key informant interviews were used to collect primary data. One on one interviews were conducted in a place where the respondents were comfortable in order to openly discuss and respond to the interview questions.
Seven focus group discussions with a range of 8-12 participants were carried out among the female sex workers who were recruited through the peer educators who are the opinion leaders among the sex workers. Key informants interview was conducted among eight respondents who included FSW’s peer educators, health care workers, project coordinator supporting or involved in sex work projects in their offices and managers at the entertainment centres.

3.10 Determination of STIs Knowledge index

Five questions were used to score the level of FSW’s knowledge on STIs. Each correct answer was scored 1 and do not know answer was scored 0 for whether one was aware of any type of disease transmitted through sexual contact. A scale of 0-3 was used to measure respondent knowledge level on examples of STIs and STI’s symptoms while a scale of 0-2 was used for prevention methods and mode of transmission. Respondents overall knowledge on STIs was rated on scale of 0-11 points: 1 = High Knowledge (8-11 points), 2 = Low knowledge (0-7 points). Ultimate knowledge of the population was taken by the number who provided valid responses for all the 11 questions and the average STIs knowledge index was 7.5.

3.11 Data analysis

Quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS) version 22. First, descriptive statistics were calculated for all data collected. analyzed using the Statistical Package for Social Scientists (SPSS) version 20. Hypothesis testing was done using chi-square and significance level set at p - value ≤
0.05. Finally, all independent variables identified to be significantly associated with health seeking behaviour for STIs at chi-square analysis were considered together into a binary logistic regression analysis. Data from focus group discussions and key informant interviews was transcribed at the end of each field day and analysed per theme.

3.12 Ethical considerations

Approval was granted by the Graduate School, ethical clearance was obtained from Kenyatta University Ethics Review Committee while research permit was given by the National Council for Science, Technology and Innovation (NACOSTI) in the Ministry of Higher Education Science and Technology (MoHEST). Authorization to carry out the study was sought from Uasin Gishu County administration. In addition, informed consent was sought from respondents with anonymity being maintained to ensure confidentiality. Privacy was maintained by one-on-one basis for interview schedule. The information gathered was entered into the computer and safeguarded with a password.
CHAPTER FOUR: RESULTS

4.1 Socio-demographic characteristics of the respondents

Table 4.1 shows socio-demographic characteristics of the respondents. Majority (27.1%) of the respondents were aged 20-24 years. About thirty-eight percent (38.1%) had no formal education while only 37.4% had attained post-primary school education. Majority (32.1%) of the respondents earned above ksh. 9000 per month from their main occupation.

Table 4.1: Socio demographic characteristics of the respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency (N=139)</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>&lt;20 years</td>
<td>19</td>
<td>13.6</td>
</tr>
<tr>
<td></td>
<td>20 to 24 years</td>
<td>38</td>
<td>27.1</td>
</tr>
<tr>
<td></td>
<td>25 to 29 years</td>
<td>24</td>
<td>17.1</td>
</tr>
<tr>
<td></td>
<td>30 to 34 years</td>
<td>18</td>
<td>12.9</td>
</tr>
<tr>
<td></td>
<td>35 to 39 years</td>
<td>15</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>&gt;39 years</td>
<td>25</td>
<td>18.6</td>
</tr>
<tr>
<td>Level of education</td>
<td>Non formal</td>
<td>53</td>
<td>38.1</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>34</td>
<td>24.5</td>
</tr>
<tr>
<td></td>
<td>Post primary</td>
<td>52</td>
<td>37.4</td>
</tr>
<tr>
<td>Main Occupation</td>
<td>Student/unemployed</td>
<td>101</td>
<td>72.1</td>
</tr>
<tr>
<td></td>
<td>Casual labour/salaried/business</td>
<td>38</td>
<td>27.9</td>
</tr>
<tr>
<td>Monthly income</td>
<td>&lt;ksh 3000</td>
<td>38</td>
<td>27.1</td>
</tr>
<tr>
<td></td>
<td>Ksh 3001 to 6000</td>
<td>25</td>
<td>17.9</td>
</tr>
<tr>
<td></td>
<td>Ksh 6001 to 9000</td>
<td>32</td>
<td>22.9</td>
</tr>
<tr>
<td></td>
<td>&gt;ksh 9000</td>
<td>44</td>
<td>32.1</td>
</tr>
</tbody>
</table>
4.2 Female sex workers’ sexual behaviour

4.2.1 FSWs period in sex work

Table 4.2 shows FSWs period in sex work. Majority (53%) of the respondent had been in sex work for more than 1 year to 5 years while the least (12%) had been in the sex work for more than 10 years. Majority (42.9%) of the respondent experienced sexual debut between the ages of 15 to 19 years while the least (21.4 %) above 19 years of age. Almost half (48.6%) of the respondent started engaging in sex work in the age of between 19 to 23 years.

Table 4.2: FSWs period in sex work

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency (N=139)</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in Sex work</td>
<td>&lt;1 year</td>
<td>18</td>
<td>13.6</td>
</tr>
<tr>
<td></td>
<td>&gt;1 to 5 years</td>
<td>74</td>
<td>52.9</td>
</tr>
<tr>
<td></td>
<td>&gt;5 to 10 years</td>
<td>30</td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td>&gt;10 years</td>
<td>17</td>
<td>12.1</td>
</tr>
<tr>
<td>Age in sexual debut</td>
<td>10 to 14 years</td>
<td>49</td>
<td>35.7</td>
</tr>
<tr>
<td></td>
<td>15 to 19 years</td>
<td>60</td>
<td>42.9</td>
</tr>
<tr>
<td></td>
<td>&gt;19 years</td>
<td>30</td>
<td>21.4</td>
</tr>
<tr>
<td>Age respondent started engaging in sex work</td>
<td>&lt;19 years</td>
<td>32</td>
<td>22.9</td>
</tr>
<tr>
<td></td>
<td>19 to 23 years</td>
<td>68</td>
<td>48.6</td>
</tr>
<tr>
<td></td>
<td>24 to 28 years</td>
<td>30</td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td>&gt;28 years</td>
<td>9</td>
<td>7.1</td>
</tr>
</tbody>
</table>
4.2.2 Respondent sexual practice

Table 4.3 presents data on respondent practice in sex work where majority (70.7%) of the respondents had 30 or more clients in a month while minority (13.6%) had between 16 to 20 clients in a month. Most (80.7%) of the respondent reported having regular sex partners. Most of the respondents engaged in vaginal sex with both regular (94.7%) and casual clients (95.7%).

Table 4.3: Respondent sexual practice

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Frequency N=139</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of clients the respondent have in a month</td>
<td>11-15 clients</td>
<td>21</td>
<td>15.7</td>
</tr>
<tr>
<td></td>
<td>16 to 30 clients</td>
<td>19</td>
<td>13.6</td>
</tr>
<tr>
<td></td>
<td>&gt;30</td>
<td>99</td>
<td>70.7</td>
</tr>
<tr>
<td>Number of casual clients respondent had in the last one month</td>
<td>11-15 clients</td>
<td>26</td>
<td>18.6</td>
</tr>
<tr>
<td></td>
<td>16 to 30 clients</td>
<td>20</td>
<td>15.0</td>
</tr>
<tr>
<td></td>
<td>&gt;30</td>
<td>93</td>
<td>66.4</td>
</tr>
<tr>
<td>Whether respondent has a regular sex partner</td>
<td>Yes</td>
<td>113</td>
<td>80.7</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>26</td>
<td>19.3</td>
</tr>
<tr>
<td>whether respondent use condom with every client</td>
<td>Yes</td>
<td>35</td>
<td>25.7</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>104</td>
<td>74.3</td>
</tr>
<tr>
<td>Amount earned by respondent per session</td>
<td>&lt; ksh. 500</td>
<td>78</td>
<td>56.4</td>
</tr>
<tr>
<td></td>
<td>≥ksh. 500</td>
<td>61</td>
<td>43.6</td>
</tr>
</tbody>
</table>
4.3 Female Sex Workers’ knowledge of STIs

4.3.1 FSWs knowledge level of STI

Table 4.4 shows FSWs knowledge level of STIs where majority of the respondents (66.2%) had average level of knowledge on STIs while 33.8% had a low level of knowledge on STIs.

Table 4.4 FSWs knowledge level of STI

<table>
<thead>
<tr>
<th>Category</th>
<th>Proportions</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>High knowledge level</td>
<td>92</td>
<td>66.2%</td>
</tr>
<tr>
<td>Low Knowledge level</td>
<td>47</td>
<td>33.8%</td>
</tr>
</tbody>
</table>
4.3.2 Respondent by types of STIs known

Figure 4.1 shows respondents by the type of STIs known. Despite majority (66.2%) of the respondents reporting average level of knowledge, only HIV/AIDS, syphilis, genital herpes and gonorrhoea were mentioned as examples of STIs; majority (97.1%) of the respondent listing HIV/AIDS as diseases they knew which is contracted through sexual contact.

Figure 4.1: Respondents by types of STIs known
*Multiple responses were allowed; the sums of responses are therefore greater than 100%
4.4 Healthcare seeking behaviour on key STIs among the female sex workers.

4.4.1 Respondent experience on STIs symptoms

Figure 4.2 shows respondent experience on STIs symptoms. The study found out that majority of the respondents (80.6%) reported having ever experienced STI symptoms in the past 12 months before the study. Majority (74.1%) of the respondents had experienced abnormal vaginal discharge.

![Figure 4.2: Respondent experience on STIs symptoms](image)

*Multiple responses were allowed on experience of STI symptoms; the sums of responses are therefore greater than 100%*

4.4.2 Respondents by health seeking behaviour

Figure 4.3 shows respondents by health seeking behaviour. Among the 80.6% FSWs who experienced STIs symptoms only 66.2% sought treatment and only 4.1% sought
it immediately/on onset of the STI symptoms. The respondents who sought treatment did so in different places; 68.5% from private health facilities, 19.7% from public health facilities, 9.7% self-medicated themselves through purchasing drugs from the pharmacy and 2.1% from herbalists. Additionally, during one of the FGD, respondents said they have several options when one experiences symptoms/conditions believed to be STI. “we buy drugs from the chemist, visit a wellness centre for treatment, wait and observe the progress of the symptoms and if it worsen I go to the hospital, buy some herbs, and wash the vagina with coke” (FGD 07). Most of the FSWs stated they would seek for treatment from private clinics (wellness centre) than public health facility due to the following reasons; “health care providers at the wellness centre are friendly and services are free. In public health facility they are several people which leads to wasting time and maybe, there is harassment at the public health facility especially by female doctors some of whom think we snatched their husband” (FGD 01).

![Health seeking behaviour](image)

**Figure 4.3: Respondent by health seeking behaviour**
4.4.3 Distribution of respondents by reasons for not seeking treatment

Figure 4.4 shows respondents by reasons for not seeking treatment. Of the respondents who had not sought treatment (34.8%), majority (63.1%) stated long waiting time as a key reason while 12.5% stated that the nearest health facility was far.

Figure 4.4: Distribution of respondents by reasons for not seeking treatment

*Multiple responses were allowed on reasons for not seeking treatment; the sums of responses are therefore greater than 100%

4.5 Healthcare system determinants of health seeking behaviour

4.5.1 Effects of healthcare system on health seeking behavior among FSWs

Table 4.5 shows effects of healthcare system on health seeking behaviour among the FSWs. Majority (30.1%, 20.4%, 28.5% and 26.5%) of the respondents did not seek treatment due to perceived negative HCP attitude and behaviour, health facilities were not accessible, treatment cost not affordable and long waiting time at the health facility
respectively. To score HCP attitude and behavior, 5 questions were asked. A response was considered valid if it provided the correct answer ‘YES’. One point was given for every valid response and zero for invalid response. Respondents overall perceived HCP attitude and behaviour was rated on scale of 0-5 points: 1 = Positive attitude and behavior (3-5 points), 2 = Negative attitude and behavior (0-2 points). Average score for HCP attitude and behavior was 2.7.

Table 4.5: Effects of healthcare system on health seeking behavior among FSWs

<table>
<thead>
<tr>
<th>Healthcare system factors</th>
<th>Category</th>
<th>FSWs sought treatment</th>
<th>Frequency (N=73) (%)</th>
<th>Frequency (N=40) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived HCP attitude and behaviour</td>
<td>Positive attitude</td>
<td></td>
<td>67 (59.3)</td>
<td>6 (5.3)</td>
</tr>
<tr>
<td></td>
<td>Negative attitude</td>
<td></td>
<td>6 (5.3)</td>
<td>34 (30.1)</td>
</tr>
<tr>
<td>Accessibility to preferred health facility</td>
<td>Accessible</td>
<td></td>
<td>65 (57.5)</td>
<td>17 (15.0)</td>
</tr>
<tr>
<td></td>
<td>Not accessible</td>
<td></td>
<td>8 (7.1)</td>
<td>23 (20.4)</td>
</tr>
<tr>
<td>Health facility opening hours</td>
<td>Day time</td>
<td></td>
<td>57 (50.4)</td>
<td>34 (30.1)</td>
</tr>
<tr>
<td></td>
<td>Day and Night</td>
<td></td>
<td>16 (14.2)</td>
<td>6 (5.3)</td>
</tr>
<tr>
<td>Treatment cost in Ksh</td>
<td>Affordable</td>
<td></td>
<td>60 (53.1)</td>
<td>8 (7.1)</td>
</tr>
<tr>
<td></td>
<td>Not affordable</td>
<td></td>
<td>13 (11.5)</td>
<td>32 (28.5)</td>
</tr>
<tr>
<td>Average waiting time in minutes</td>
<td>≤10</td>
<td></td>
<td>46 (40.7)</td>
<td>10 (8.8)</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td></td>
<td>27 (23.9)</td>
<td>30 (26.5)</td>
</tr>
</tbody>
</table>
4.6 Determinants of health seeking behavior for key STIs

4.6.1 Socio-demographic and economic characteristics of female sex workers

Table 4.6 shows socio-demographic and economic characteristics of FSWs as determinants of health seeking behaviour. Health seeking behaviour among female sex workers’ level of education and monthly income were found to be statistically significant (p<0.05). However, age and main occupation categories were not significantly associated with health seeking behaviour.

<table>
<thead>
<tr>
<th>Socio-demographic characteristic</th>
<th>Category</th>
<th>FSWs sought treatment</th>
<th>Chi-square test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Age (years)</td>
<td>18 to 19</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>20 to 24</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>25 to 29</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>30 to 34</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>&gt;35</td>
<td>22</td>
<td>15</td>
</tr>
<tr>
<td>Level of education</td>
<td>Informal</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>22</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Post Primary</td>
<td>29</td>
<td>11</td>
</tr>
<tr>
<td>Main occupation</td>
<td>Student/unemployed</td>
<td>53</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Casual labour/salaried/business</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly income (ksh)</td>
<td>&lt;$3000</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>3001 to 6000</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>6001 to 9000</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>&gt;9000</td>
<td>24</td>
<td>10</td>
</tr>
</tbody>
</table>
4.6.2 FSW knowledge of STI as determinant of health seeking behavior

Table 4.7 shows FSW’s knowledge of STI as determinants of health seeking behaviour. There was no significant relationship between health seeking behaviour and FSW’s knowledge of STIs ($\chi^2=0.542$, $df=1$, $P=0.461$).

<table>
<thead>
<tr>
<th>FSW Knowledge of STI</th>
<th>Category</th>
<th>FSWs sought treatment</th>
<th>Chi-square test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes (N= 73) (%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No (N= 40) (%)</td>
<td></td>
</tr>
<tr>
<td>Knowledge level</td>
<td>High knowledge level</td>
<td>47 (41.6)</td>
<td>$\chi^2=0.542$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27 (23.9)</td>
<td>$df=1$</td>
</tr>
<tr>
<td></td>
<td>Low knowledge level</td>
<td>26 (23)</td>
<td>$P=0.461$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13(11.5)</td>
<td></td>
</tr>
</tbody>
</table>
4.6.3 FSWs sexual behaviors determinants of health seeking behaviour

Table 4.8 shows FSW’s sexual behaviour as determinant of health seeking behaviour. The study shows that number of years in sex work ($\chi^2=8.861$, df=3, p=0.031), age when FSW engaged in sexual debut ($\chi^2=7.857$, df=2, p=0.020), FSW having regular clients ($\chi^2=6.190$, df=1, p=0.013) and number of regular clients ($\chi^2=3.850$, df=1, p=0.05) were found to be statistically significant (p<0.05). However, there was no significant statistical relationship between number of casual clients FSW had in the previous month ($\chi^2=1.170$, df=2, p=0.557).

Table 4.8: FSWs’ sexual behavior as determinant of health seeking behavior

<table>
<thead>
<tr>
<th>Sex Work characteristics</th>
<th>FSWs sought treatment</th>
<th>Chi-square test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>Proportion (%)</td>
</tr>
<tr>
<td>Number of years in sex work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤1</td>
<td>12</td>
<td>16.4</td>
</tr>
<tr>
<td>&gt; 1 to 5</td>
<td>42</td>
<td>57.5</td>
</tr>
<tr>
<td>&gt; 5 to 10</td>
<td>9</td>
<td>12.3</td>
</tr>
<tr>
<td>&gt; 10</td>
<td>10</td>
<td>13.7</td>
</tr>
<tr>
<td>Age in years for sexual debut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 to 14</td>
<td>31</td>
<td>42.5</td>
</tr>
<tr>
<td>15 to 19</td>
<td>25</td>
<td>34.2</td>
</tr>
<tr>
<td>Above 19</td>
<td>17</td>
<td>23.3</td>
</tr>
<tr>
<td>Have regular clients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>66</td>
<td>90.4</td>
</tr>
<tr>
<td>No</td>
<td>7</td>
<td>9.6</td>
</tr>
</tbody>
</table>
4.6.4 HIV knowledge and practise characteristics of FSWs as determinants of health seeking behaviour

Table 4.9 shows the HIV knowledge and practise characteristics of FSWs as determinant of health seeking behaviour. Knowledge on FSW HIV test period ($\chi^2=5.371, df=1, p=0.025$) and FSW having had a HIV test ($\chi^2=9.299, df=1, p=0.002$) were statistically significant. However, there was no statistical significant relationship between the stated FSW testing period ($\chi^2=0.699, df=1, p=0.403$) and health seeking behaviour.

Table 4.9: HIV knowledge and practice characteristics as determinants of health seeking behaviour

<table>
<thead>
<tr>
<th>FSWs sex characteristic</th>
<th>Category</th>
<th>FSWs sought treatment</th>
<th>Chi-square test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>Proportion (%)</td>
<td>Frequency</td>
</tr>
<tr>
<td>Knowledge on FSW HIV test period</td>
<td>Yes</td>
<td>44</td>
<td>38.9</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>29</td>
<td>25.7</td>
</tr>
<tr>
<td>FSW HIV test period (Months)</td>
<td>After every 3</td>
<td>27</td>
<td>61.4</td>
</tr>
<tr>
<td></td>
<td>&gt;3</td>
<td>17</td>
<td>38.6</td>
</tr>
<tr>
<td>Has had HIV test</td>
<td>Yes</td>
<td>40</td>
<td>54.8</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>33</td>
<td>45.2</td>
</tr>
</tbody>
</table>
4.6.5 Healthcare systems as determinants of health seeking behavior

Table 4.10 shows healthcare systems as determinants of health seeking behaviour among the FSWs. From table 4.9, perceived HCP attitude and behaviour, travel time to the health facility, treatment cost and average waiting time were statistically significant. However, there was no statistical significant relationship between health facility opening hours and health seeking behaviour.

Table 4.10: Healthcare systems as determinants of health seeking behavior

<table>
<thead>
<tr>
<th>Healthcare system factors</th>
<th>category</th>
<th>FSWs sought treatment</th>
<th>P value</th>
<th>Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes (N=73) (%)</td>
<td>No (N=40) (%)</td>
<td></td>
</tr>
<tr>
<td>Perceived HCP attitude and behaviour</td>
<td>Positive attitude</td>
<td>67 (59.3)</td>
<td>6 (5.3)</td>
<td>$\chi^2=66.617$</td>
</tr>
<tr>
<td></td>
<td>Negative attitude</td>
<td>6 (5.3)</td>
<td>34 (30.1)</td>
<td></td>
</tr>
<tr>
<td>Travel time the preferred HF</td>
<td>Accessible</td>
<td>65 (57.5)</td>
<td>17 (15.0)</td>
<td>$\chi^2=28.116$</td>
</tr>
<tr>
<td></td>
<td>Not accessible</td>
<td>8 (7.1)</td>
<td>23 (20.4)</td>
<td></td>
</tr>
<tr>
<td>Health facility opening hours</td>
<td>Day time</td>
<td>57 (50.4)</td>
<td>34 (30.1)</td>
<td>$\chi^2=0.789$</td>
</tr>
<tr>
<td></td>
<td>Day &amp; Night</td>
<td>16 (14.2)</td>
<td>6 (5.3)</td>
<td></td>
</tr>
<tr>
<td>Treatment cost in Ksh</td>
<td>Affordable</td>
<td>60 (53.1)</td>
<td>8 (7.1)</td>
<td>$\chi^2=41.707$</td>
</tr>
<tr>
<td></td>
<td>Not affordable</td>
<td>13 (11.5)</td>
<td>32 (28.5)</td>
<td></td>
</tr>
<tr>
<td>Average waiting time in minutes</td>
<td>≤10</td>
<td>46 (40.7)</td>
<td>10 (8.8)</td>
<td>$\chi^2=14.938$</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>27 (23.9)</td>
<td>30 (26.5)</td>
<td></td>
</tr>
</tbody>
</table>
4.7 Independent predictors of health seeking behaviour for STIs among FSWs.

Table 4.11 shows independent predictors of health seeking behaviour among FSWs. Binary logistic regression was used to determine predictors of health seeking behaviour for STIs among the female sex workers. The strongest independent predictor of health seeking behaviour were perceived HCP attitude and behaviour, distance to the preferred health facility, treatment cost, waiting time and FSWs who had received a HIV test. This is clear that individuals who had had a HIV test were more likely to seek treatment for STI compared to those who had not had a HIV test. Others independent predictors included; educational level and monthly income.

### Table 4.11: Independent predictors of health seeking behaviour among FSWs

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>P-Value</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Level</td>
<td>Informal</td>
<td>0.037</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>0.839</td>
<td>(0.280, 2.514)</td>
</tr>
<tr>
<td></td>
<td>Post Primary</td>
<td>2.636</td>
<td>(1.060, 6.560)</td>
</tr>
<tr>
<td>Monthly Income (ksh)</td>
<td>≤3000</td>
<td>-</td>
<td>0.720 (0.223, 2.327)</td>
</tr>
<tr>
<td></td>
<td>3001 to 6000</td>
<td>1.029</td>
<td>(0.307, 3.442)</td>
</tr>
<tr>
<td></td>
<td>6001 to 9000</td>
<td></td>
<td>2.880 (1.052, 7.882)</td>
</tr>
<tr>
<td></td>
<td>&gt;9000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years in sex work</td>
<td>≤1 year</td>
<td>0.079</td>
<td>3.111 (0.797, 12.140)</td>
</tr>
<tr>
<td></td>
<td>&gt;1 to 5 years</td>
<td>0.762</td>
<td>(0.225, 2.576)</td>
</tr>
<tr>
<td></td>
<td>&gt;5 to 10 years</td>
<td>0.833</td>
<td>(0.187, 3.723)</td>
</tr>
<tr>
<td></td>
<td>&gt;10 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had HIV test</td>
<td>Didn’t test</td>
<td>0.001</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Tested</td>
<td></td>
<td>3.196 (1.389, 7.352)</td>
</tr>
<tr>
<td>HCP attitude and behavior</td>
<td>Positive attitude</td>
<td>&lt;0.001</td>
<td>63.278 (18.973, 211.036)</td>
</tr>
<tr>
<td></td>
<td>Negative attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel time in Minutes</td>
<td>Accessible</td>
<td>&lt;0.001</td>
<td>10.993 (4.186, 28.869)</td>
</tr>
<tr>
<td></td>
<td>Inaccessible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment cost</td>
<td>Affordable</td>
<td>&lt;0.001</td>
<td>18.462 (6.931, 49.174)</td>
</tr>
<tr>
<td></td>
<td>Not affordable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiting time</td>
<td>≤10</td>
<td>&lt;0.001</td>
<td>5.111 (2.165, 12.067)</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion of results

5.1.1 Socio-demographic and economic characteristics of the respondents

The results indicated that majority of the respondents were aged between 18-29 years. The results indicated that the population consisted of young women who engaged in sex work. The findings were similar with those of Kenya National Bureau of Statistics et al., (2010) and Kalla et al., (2007) studies which found out that the high number of women who can be identified as female sex workers are young women who engage in transactional sex and at times in so called ‘part-time’ sex work.

The level of education as well as monthly income were found to be statistically significant. Female sex workers whose level of education was informal and monthly income was less than ksh. 3000 were less likely to seek for treatment. These findings were consistent with study by Kurtz et al. (2011) in Ethiopia which found out that even if healthcare is available, sex workers may not be able to protect their health because of lack of knowledge and inadequate income. Reasons given by those who had reached a primary level was poverty; the lack of money led to them dropping out from school.

“…..Because according to my parents, they did not have money to pay for my school fees to enable me proceed to form one”.
5.1.2 FSWs knowledge of STIs

The study results showed that majority (66.2%) of the respondents had average level of knowledge of STIs. However, the knowledge level for HIV/AIDS was higher than other STIs. The study agreed with IBBS study results by National AIDS/STI Control Programme, (2016) which noted that most FSWs seemed to lack knowledge about STIs and many reported that they had received insufficient information related to STIs including HIV. The reason could be a thin line between STIs and HIV/AIDS. The lack of complete knowledge and understanding of STIs may affect and hinder access of services by FSWs. The understanding of STIs was not very clear to most sex workers, and this necessitates the need to sensitize and create more awareness through continuous provision of information on STIs and HIV/AIDS to sex workers. This could be done through peer education where trained sex workers sensitize their peers.

There were different understandings on the meaning of STIs where the following responses were given “STIs are diseases that kill people very fast like HIV/AIDs”; “.....STIs are diseases that are sexually transmitted”“....STI is contracting diseases such as gonorrhea due to engaging in unprotected sex” and “..... STIs are as a result of witchcraft”. The following were stated as symptoms of STIs “...vaginal discharge, feeling pain and itchy while urinating, abdominal pain, losing weight, feeling pain while having sexually intercourse, foul smell from the vagina and vaginal bleeding” (FGD 03). The study results were similar to those of Solomon et al., (2008) who concluded that knowledge and awareness of STIs are key factors responsible for
behaviour change among FSWs in India. Lack of complete knowledge and understanding of STIs may affect and hinder access of healthcare services by FSWs especially on matters related to sexual reproductive health. FSWs gave different responses when asked if they knew methods of reducing STI transmission, these included: avoiding multiple sexual partners, always having protected sex, avoiding deep kissing, not sharing sharp objects, abstinence from sexual intercourse, washing vagina with antiseptic, men withdrawing before ejaculation, taking a bath or urinating immediately after sexual intercourse, and visiting VCT for testing. “if you have unprotected sex and he withdraws before ejaculating, you will not be infected, alternatively you can have a short call immediately after sex; but there are some people who cannot do that though there are some who know that after having unprotected sex with a man, you go and take a shower immediately and you also urinate so that those things (semen) come out” (FGD 03).

In another FGD, FSWs stated that the community believes STIs are the caused by: unprotected sex, blood transfusion, prostitution, witchcraft, kissing, use of family planning, sharing needles. One of the FSWs said the following; “the most common and easiest way in which the community belief causes STIs is prostitution and that’s why we are not liked by people and they ridicule us calling us ‘malaya’ (meaning prostitute)” (FGD 01).

Majority of the respondents knew the services they offer to their clients put them at a high risk of contracting and spreading STIs and especially HIV/AIDs. Even with this knowledge, only a few of the respondents had tested for HIV/AIDs. Additionally, due
to the nature of FSWs’ work and the high rate of partner change, FSWs are supposed to test for HIV after every 3 months. According to the study findings only 68.9% of the FSWs knew the correct period of testing. The study results show that knowledge on FSW HIV test period and FSW having had a HIV test were statistically significant with good health seeking behaviour. Poor health seeking behaviour could be attributed to inadequate knowledge of HIV testing period. The study results were similar to those of Kalla et al., (2007) which found out that if one test for HIV they are more likely to test for STIs and seek treatment.

5.1.3 FSWs health seeking behaviour for STIs

The study results established that majority of the respondent (80.6%) had ever experienced STIs symptoms/conditions. These results were almost similar to findings by Phrasisombath et al., (2012) which indicated that majority of respondents (86.7%) reported having STI symptoms in the past three months prior to the study. The result also agreed with a study conducted by Saphonn (2008) and Behet (2013). When sex work is characterized by high rates of client change and unprotected sex, it is associated with high rates of HIV and other STIs.

Out of the respondents who had experienced STIs symptoms only 65.2% sought for treatment. The results were similar to those of Phrasisombath et al., (2012) which found out that among the respondent who reported STI symptoms only 67.4% sought treatment. Failure to seek treatment for STI symptoms could lead to some complications as highlighted during KII by a healthcare provider. Some of the complications highlighted included; ectopic pregnancy, pelvic inflammatory diseases,
cervical cancer, infertility, preterm labour and congenital infections. The study further illustrates that among those who sought for treatment, majority (68.5%) did so in private clinic and in this case private clinic were the wellness centre established by NGOs while the rest went to government health facility, pharmacy or herbalist. The results were consistent with responses given by FSWs during one of the FGD where members said the following; “doctors in the private hospital keep our information private and confidential which encourages most of us to seek treatment whenever we are sick” (FGD 05). However, these results disagree with findings by Ghimire et al., (2009) in Nepal which found out that FSWs perceived that sexual health services in the government hospital were cheaper, but the opening hours were less appropriate. Their rating of the quality of doctors was higher in the government hospital while doctors and nurses from private hospitals were perceived as being poorly trained and less experienced.

Despite the fact that most of the respondents who experienced STIs symptoms sought treatment, only 4.1% did so immediately/on on-set of the symptoms. The findings were closely related to a study conducted in Ethiopia by Kurtz et al. (2011), which reported that over 80% of patients seek STI treatment having had symptoms for over a week, with 40% already on some form of treatment. The results were also similar to a study conducted in Laos by Phrasisombath et al., (2012). The results are alarming since delayed treatment of STIs could have a profound impact on the health of the women both during their time as sex worker and in their future lives. Delay of or
mistreatment for STIs has been shown to result in infertility, ectopic pregnancy, cervical cancer, and increased risk of acquiring HIV (Delvaux et al., 2009).

Most (55%) of the respondents who didn’t seek treatment had informal education, this group is at a higher risk of contracting STI and HIV infection due less power to negotiate condom use and higher number of sexual clients compared to those with formal education. In addition, low level of education among the FSWs has been attributed to lack of knowledge about the consequences of unsafe sex.

Majority of the respondents who didn’t seek treatment for STI symptoms stated the following as barriers; long waiting time, identified issue was normal and unfriendly HCP. Other barriers to seeking care cited were lack of confidentiality and judgemental attitude from the HCP, lack of money and long distance to the health facility. Respondents who had not sought treatment cited barriers that seemingly resulted from previous negative experiences from the HCP when seeking healthcare services. The study result reflected those of Kurtz et al. (2011) and Moses (2007), which found out that even if healthcare is available, sex workers may not be able to protect their health because of lack of knowledge, low self-esteem, fear of discrimination, the burden of traditional household duties, the opportunity cost of time away from work, or the inability to cover transportation costs.

5.1.4 Healthcare system factors that influence FSWs health seeking behavior

According to Nalangan et al. (2011), many health care providers are not able, or are unwilling, to diagnose oral and ano-rectal STIs in female, male and transgender sex workers. In some countries, STI and HIV testing is mandatory for sex workers and
confidentiality is not assured and judgmental attitudes of HCPs. This has led to discrimination, loss of livelihood and even violence. The study results found out that 30.0% of the respondent who had experienced STI symptoms, didn’t seek treatment due to unfriendly HCPs and 29.7% due to HCP negative attitude and behaviour. In addition, majority (63.1%) of the respondent indicated long waiting time at the clinic as a barrier to seeking care. This may be attributed to competing priorities for the FSWs’ time where they earn their living based on the number of clients who can call them anytime as one FGD discussant explained; “Whenever I am called by a client for a job I have to go even if I have a clinic appointment, feeding my children is my biggest challenge, I have to deal with it first”. Long waiting time at the clinic may encourage FSWs to leave the clinic without being seen by a HCP

Other barriers cited include lack of money and long distance to the health facility. This results agreed with those of Phrasisombath et al., (2012). The healthcare systems factors (perceived HCP attitude and behaviour, distance to the preferred health facility, treatment cost and average waiting time) had a very strong statistical significance with healthcare seeking behaviour. The study results agree with a study results conducted in Nepal by Kurtz et al., (2011) which found out that FSWs perceived inappropriate clinic opening hours, poor communication with care providers, discrimination, lack of confidentiality and fear of public exposure as barriers to accessing and using health services. Although stigma was not explicitly mentioned by the respondents, their spontaneous comments about providers’ judgmental attitudes could be perceived as
stigmatizing. “If I visit XX drop in center and disclose what I am experiencing to the
HCP I will be attended to well. Sometimes you may visit a public hospital only to find
unfriendly HCP who quarrels you when you disclose to her signs that are likely to be
of STI. She will quarrel and use abusive language to you saying you should have been
careful enough while sleeping around with men. Later on she will ask how you expect
her to examine your smelly reproductive organs while she wasn’t with you when
contracting the STI. Some of them will even leave the room to go and ask their
colleagues to come and examine you which is very humiliating since you expected to
be treated with privacy and confidentiality” (FGD 07).

Inadequate information on healthcare appeared to be a major barrier to health care
seeking behavior among the FSWs. Some FSWs did not know where to access health
care while others knew but placed it low on their priorities. During one of the FGD it
was reported that healthcare system influences the health seeking behavior for STIs
among the FSWs. Most of the respondent stated that incase of any ailments they
always go to private clinic (wellness centre) while a few would go to the public health
facility or don’t seek for treatment at all. Those who go to private clinic do so since
the healthcare providers are friendly and services are free. However, those who go to
the public health facility stated that they don’t reveal the kind of work they do since
they can be detained and handed over to the police. In addition, HCPs at the public
health facility are not friendly and confidential. One of the respondent narrated her
ordeal where she said “…I had been going to this public health facility due to some
vaginal pain and had disclosed to the male HCP the kind of work I do; so he told me to come with my partner in the next appointment which I religiously did. So when we got into the hospital he asked my partner who was planning to marry me; do you know the work this lady you live with does? I hope you have not been having sexual intercourse with her because she sleeps with several men and that’s why she is here to be treated. My partner looked at me and walked out, I felt so disheartened and abused that HCP and have never gone back to that hospital again. I lost my regular client who was paying all my bills and was willing to marry me. I hate public hospital” (FGD 06). The discussion was closely related to a study in Tamil Nadu by Rachna (2014) which revealed that 65.0% of FSWs who had STI symptoms never sought health care. This was due to lack of privacy, lack of a female doctor at the health facility, high cost of treatment, limited decision-making power and subordinate social status. Therefore, more attention should be paid to those respondents who claimed that they did not know where they could get the services they needed, with a focus on those who are just entering sex work. This indicates the need to upgrade the existing information and find creative ways of communicating this information to FSWs, particularly adolescents who are at greatest risk according to the results.

During the KII, the health care provider stated that long waiting period at the health facility due to high turn up of general population which FSWs perceive as wastage of time, charges for laboratory test and drugs were key barriers for FSWs in seeking healthcare for STIs. A HCP stated; “, if one is suffering from STIs we will definitely
require to carry out some lab test which are charged. Once the patient has been diagnosed with STI they will be expected to purchase drugs which in most cases could be out of stock in the hospital pharmacy”.

The following were reported as gaps and challenges in service delivery to FSWs; challenges in follow up of FSWs since they are hard to reach population and due to their mobility, for the FSWs who test positive for STIs, it is difficult to get them to bring their partners for a test, condoms are distributed in large quantities but very few FSWs use the condoms correctly and consistently, there is high stigma towards the FSWs thus preventing them from accessing social and health services, payment of healthcare services in government health facilities and some health facilities provide services during the day when the FSWs are sleeping thus making the FSWs seek services from the chemist. The responses were consistent with the study results in Côte d’Ivoire by Rachna (2014) which found financial barriers to be the main reason for FSWs not visiting a public health centre when experiencing health problems.
5.2 Conclusions

1. The FSWs’ knowledge levels of key STIs was average at 66.2% though majority (97.1%) of the FSWs were more knowledgeable on HIV/AIDS; however, their knowledge level of other STIs was low at 19.4% gonorrhoea, 16.7% syphilis and 9.7% genital herpes.

2. Majority (80.6%) of the FSWs had ever experienced STI symptoms and only 65.2% sought treatment. However, timely treatment of STI symptoms was poor since only 4.1% did seek for treatment immediately/on on-set of the symptoms.

3. Among the 34.8% who didn’t seek treatment, there were several barriers to accessing STI services which were both structural and individual factors including long waiting time, identified issues was normal, unfriendly healthcare providers, healthcare providers’ judgemental attitude and long distance to the health facility.

4. The main determinants of health seeking behaviour for key STIs were FSW education level, monthly income, having tested for HIV, HCP attitude and behaviour, travel time to the preferred health facility, treatment cost and waiting time at the hospital. The null hypothesis is therefore rejected.

5.3 Recommendations

1. There is need for the ministry of health to study on what have worked well around HIV/AIDS in increasing the level of knowledge among the FSWs and have it integrated into other key STIs programming.
2. There is need for healthcare workers to sensitize and create more awareness to FSWs on the importance of early diagnosis and treatment of STIs.

3. There is need for NASCOP to continuously sensitize healthcare workers on healthcare service provision to FSWS indiscriminately and in a friendly manner in order to reduce on the barriers of accessing STI services among the FSWs.

**5.4 Suggestions for further research**

1. There is need for further research on identification of innovative package to reduce on the barriers to accessing healthcare services for STIs

2. There is need for further studies why age, knowledge level, HF opening hours and number of casual clients as determinants, did not have any significance on health seeking behaviour among the FSWs.

3. There is need for further research on what programs have worked around HIV/AIDS in increasing the level of knowledge among the FSWs and have it integrated into other key STIs programming.
REFERENCES


**Ghimire, L., and Teijlingen, E. (2009).** Barriers to Utilisation of Sexual Health Services by Female Sex Workers in Nepal. *Global Journal for Health Science; Vol 1, No. 1*, 18-22.


Appendix 1: Questionnaire

PART ONE: SOCIO DEMOGRAPHIC INFORMATION

Q001. Sex

Male [1]
Female [2]

Q002. Age in years

<20 [1]
≥20 to 24 [2]
≥25 to 29 [3]
≥30 to 34 [4]
≥35 to [5]

Q003. What is the highest level of education that you have attained?

Informal education [1]
Primary [2]
Secondary [3]
College/university [4]

Q004. What is your marital status?
Never married/cohabiting [1]
Married [2]
Separated/divorced [3]
Widowed [4]

Q005. What is your MAIN occupation?

Student/Unemployed [1]
Casual labour [2]
Business [3]
Salaried employment [4]
Others (Specify) [5]

Q006. How much income do you earn per month from your main occupation?

≤3000 [1]
3001-6000 [2]
6001-9000 [3]
Above 9000 [4]

Q007. What is your religion?


Q008. How far is your living place from Eldoret town?

Less than 5 Km [1]
Between 6 to 10 km [2]
Between 10 to 20 km [3]
More than 20 km [4]

Q009. For how long have you been a resident in your area of living?

Less than 1 year [1]
Between 1 to 2 years [2]
Between 2 to 5 years [3]
Over 5 years [4]

Q011. Who do you live with?

Husband\boyfriend [1]
Husband/Children [2]
Family [3]
Friends [4]
PART TWO: SEX WORK INVOLVEMENT

Q012. For how many years have you been in sex work?

< 1 year [1]
≥1-5 years [2]
≥6-10 years [3]
>10 years [4]

Q013: What was the first age when you had your first penetrative sex (Here you need to check the sexual debut)

<10 years [1]
≥10 to 14 years [2]
≥15 to 18 years [3]
> 18 years [4]

Q014. At what age did you start engaging in sex work?

<18 years [1]
≥ 19-23 years [2]
Q015. On average how many casual clients do you have in a month?

11-15 clients [1]
16-20 clients [2]
21-25 clients [3]
26-30 clients [4]
>30 [5]

Q016: Approximately, how many casual clients did you have in the last one month?

11-15 clients [1]
16-20 clients [2]
21-25 clients [3]
26-30 clients [4]
>30 [5]

Q017. Do you have a regular sex partner?

Yes [1]
No [2]
Q018. Did you use condom the last time you had sex with?

a. Your regular sex partner?
   Yes [1]
   No  [2]

b. The casual client?
   Yes [1]
   No  [2]

Q019. Do you use condom with every client?
   Yes [1]
   No  [2]

Q020. How much did you earn per session?
   ≤Ksh. 500   [1]
   ≥ Ksh 600- 1500 [2]
   ≥1600-5000 [3]
   >Ksh 5100 [4]

Q021: What type of sexual activity do you involve yourself with when with

a. Regular partner(s).
Anal sex [1]

Vaginal sex [2]

Oral sex [3]

b. Casual clients

Anal sex [1]

Vaginal sex [2]

Oral sex [3]

PART THREE: FEMALE SEX WORKERS KNOWLEDGE AND PRACTICE ON STIs

a) Female sex workers knowledge and practice

Q022. Have you ever heard of any illness/symptoms as a result of sexual contact?

Yes [1]

No [2] (If no move to Q024)

Q023. If yes give examples; of such diseases contracted through sexual contact. (Tick where the respondent mention)

Gonorrhoea [1]

Genital Herpes [2]
HIV/AIDS [3]
Syphilis [4]
Clamydia [5]
Trichomoniasis [6]
Others, specify [7]

Q024. List any symptoms of STIs ((Tick where the respondent mention)

Vaginal bleeding between periods [1]
Pain/burning sensation while urinating [2]
Pain during intercourse [3]
Abnormal vaginal discharge [4]
Painful genital sores/ulcers [5]
Swellings around the vaginal area [6]
Foul smell from the vaginal [7]
Others, specify [8]

Q025. List any causes/mode of transmission of STIs? (Tick where the respondent mention)

Unprotected sex [1]
A condom tears during intercourse [2]

Having sexual contact with multiple partners [3]

Others Specify [4]

Q026. List prevention methods for STIs ((Tick where the respondent mention)

Abstinence [1]

Reduce Number of Sex Partners [2]

Use Condoms [3]

Others Specify [4]

Q027. Have you ever experienced STI signs/symptoms as a result of sexual contact?

Yes [1]

No [2]

Q027 b. If yes, what were the symptoms/signs?

Vaginal bleeding between periods [1]

Pain/burning sensation while urinating [2]

Pain during intercourse [3]

Abnormal vaginal discharge [4]

Painful genital sores/ulcers [5]
Swellings around the vaginal area [6]
Foul smell from the vaginal [7]
Others, specify [8]

Q028. If yes in any of the above did you seek any treatment?

Yes [1]
No [2]

a. If yes, where did you seek this treatment?

Private health facility [1]
Government health facility [2]
Pharmacy [3]
Herbalist [4]
Drug sharing with a friend [5]

b. When did you seek for healthcare?

Immediately (On-set of the symptoms) [1]
1 to 5 days after symptoms [2]
1 to 2 weeks after onset of symptoms [3]
More than 2 weeks of onset of symptoms [4]
c. If no, why did you not seek treatment

Lack of money [1]

The nearest health facility is far [2]

Unfriendly health care providers staff [3]

The identified issue was normal [4]

Negative attitude and behaviour of HCP [5]

Long waiting time [6]

Lack of confidentiality by HCP [7]

Others, specify [5]

PART FOUR: FACTORS THAT PROMOTE OR CONSTRAIN FSW FROM SEEKING FOR HEALTH CARE

a) Socio-Cultural Factors

Q029. By any chance if suffered from a reproductive tract infection would you tell anyone?

Yes [1]

No [2]

Q030. If no, why?
There is stigma in the community on sexual diseases

Because I will be embarrassed

Fear of discrimination

Others, specify

b) **Healthcare System**

Q031. What type of health facility is closest to you?

Private clinic

Public health facility

Drop in centre

Q032. What time does the nearest health facility operate?

During the day only

During the day and at night

Q033. How far is the nearest health facility?

≤ 5 kilometres

> 5 Kilometres

Q034. What means of transport do you use to go to the nearest health facility

Motobike
<table>
<thead>
<tr>
<th>Mode of Transport</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking</td>
<td>[2]</td>
</tr>
<tr>
<td>Public means (Matatu)</td>
<td>[3]</td>
</tr>
<tr>
<td>Taxi</td>
<td>[4]</td>
</tr>
<tr>
<td>Others Specify</td>
<td>[5]</td>
</tr>
</tbody>
</table>

**Q036. What would be your preferred type of health facility to seek treatment?**

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private clinic</td>
<td>[1]</td>
</tr>
<tr>
<td>Public clinic</td>
<td>[2]</td>
</tr>
<tr>
<td>Drop in centre</td>
<td>[3]</td>
</tr>
<tr>
<td>Others Specify</td>
<td>[4]</td>
</tr>
</tbody>
</table>

**Q037. How far is your preferred health facility to seek treatment?**

<table>
<thead>
<tr>
<th>Distance</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 5 kilometres</td>
<td>[1]</td>
</tr>
<tr>
<td>&gt;5 Kilometres</td>
<td>[2]</td>
</tr>
</tbody>
</table>

**Q038. The last time you visited a health facility how long did it take you before getting treatment**

<table>
<thead>
<tr>
<th>Time</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 30 minutes</td>
<td>[1]</td>
</tr>
<tr>
<td>&gt;30 minutes</td>
<td>[2]</td>
</tr>
</tbody>
</table>

**Q039. The last time you visited a health facility what was the cost of treatment**
Q040. The last time you visited a health facility how was your interaction with the HCP (question addressing Interpersonal interactions between provider and patient)

Caring and respectful [1]

Unfriendly and rude [2]

Q041. The last time you visited a health facility did the HCP observe your privacy and confidentiality

Yes [1]

No [2]

Q042. The last time you visited a health facility, did the HCP listen to your concerns/opinions (client-centred services)

Yes [1]

No [2]

Q042. The last time you visited the health facility, did the HCP explains things in easy to understand terms

Yes [1]

No [2]
Q043. The last time you visited the health facility, did the HCP judgmental on the infection you had?

Yes [1]

No [2]

PART FIVE: FSWs KNOWLEDGE AND PRACTICES ON HIV/AIDS

a) FSWs knowledge on HIV/AIDS

Q044. Have you ever heard of HIV/AIDS? (Yes [1] No [2] If No move to end and thank the respondent)

Q045. If yes, which are the ways in which HIV/AIDS is transmitted?

Through sexual contact with an infected person without using condom [1]

Through sharing sharp objects with an infected person [2]

Through blood transfusion [3]

Through delivery [4]

Through witchcraft [5]

Others, specify [6]

Q046. Do you know ways in which HIV/AIDS transmission can be prevented?
Yes [1]

No [2]

Q047. If yes, which are the ways in which HIV/AIDS can be prevented?

Use of condom during sexual intercourse [1]

PMTCT [2]

Blood screening before transfusion [3]

Avoid sharing of sharp objects [4]

Others specify [5]

Q048. Do you know after how many months a FSW should go for HIV/AIDS testing?

Yes [1]

No [2]

Q049. If yes, how many times?

After every 3 months [1]

After every 6 months after the initial testing [2]

After every 9 months after the initial testing [3]

b) FSWs practices on HIV/AIDS

Q050. Have you ever gone for HIV/AIDS testing?
Yes [1]

No [2] (If no move to Q41)

Q051. If yes, after how long did you test

3 months [1]

>3 months [2]

Q052. If yes, what made you go for the testing?

Sick/feeling unwell [1]

During pregnancy (PMTCT) [2]

Advised by an NGO [3]

Others, specify [4]

Q053. If no, why haven’t you tested?

Fear of being positive [1]

I don’t know where to go [2]

The health care providers are unfriendly [3]

Others, specify [4]
Appendix 2: Focused Group Discussion Schedule

Introductions

Everyone is asked to introduce themselves, starting with the facilitator and the person who will be taking notes on the discussion. The purpose of the group discussion should then be outlined – The facilitator should also explain what will be written down (notes of the conversation but no names etc.) and who that will be accessible to. Participants may wish to be able to see the notes of the meeting at some point.

1. What do you understand by STIs?
2. What symptoms/conditions of RIs do you know?
3. What has been your experience with STIs?
4. What does the community belief is the cause of STIs?
5. What is already known about health seeking behavior in relation to STIs within the society?
6. When FSW has any of the symptoms/conditions as named above, that are believed to be STIs, what do they do?
7. When FSWs has symptoms/conditions as mentioned above, which is believed not to be an STIs; what do they do?
8. Why do they take any of the actions mentioned in (6) and (7) above?
9. Where do most of the FSWs seek for STIs services and why?

10. Which are the socio-cultural determinants that influence health seeking behaviour for STIs among female sex workers?

11. Are there any health care systems barriers that influence health seeking behaviour for STIs among the FSWs?

12. What can be done to improve health care systems?

13. How is health-providers’ attitudes and practices an important determinant of STIs healthcare?

14. How do these attitudes and practices affect access to and use of STIs health services, particularly by FSWs of low socioeconomic status?

15. What can be done to improve health-providers’ provider practices and attitudes
Appendix 3: Key Informant Interview Schedule

Introduction

The order of the interview will depend on the situation and the role of the person. The interviewer should start by introducing themselves and outlining the purpose of the interview. The interview should not be too personal as the informant is being asked about their local knowledge. The headings are intended as subject areas to be covered, not a questionnaire. The interviewer should use opportunities presented in the discussion to move onto different areas, in whatever order seems to follow the discussion.

1. Personal information

   a) Name
   b) Address
   c) Sex
   d) Occupation

2. Information about their role

   a) Where they work and how long they have worked there
   b) How many people work there?
   c) What they own (e.g. bars etc)
d) How long they have owned place

e) Who they interact with

f) Information about place (such as, clients, how many people use the (bar), what type of people, any daily, weekly, seasonal variation.

g) If health care provider, what training they have received, what their role is, where they work, who are their patients, how many are they.

3. Health care

i) Local facilities

- Where do FSWs go when they suffer from STIs?

- Are there any obvious obstacles to health care for FSWs?

ii) Availability of treatment/advice to FSWs on STIs?

- Pharmacies

- Antibiotics over the counter

- Who gives advice on STIs to FSWs?

4. Reproductive Tract Infections

- What are STIs and which ones are common?

- What abnormal genital conditions are believed to be STIs?
• What abnormal non-genital conditions are believed to be STIs?

• What are the beliefs about causation of the conditions named above

• What STIs are related to sex?

• What causes these STIs that are related to sex

5. Recognition

• How do FSWs know when they have the diseases/conditions listed above

• What are the symptoms (what do FSWs look for)?

6. Health seeking behaviour

If FSWs thinks they have the above condition(s):

• Who do they tell?

• Where do they go for help (in any particular order?)

7. Complications

• What happens to FSWs with these conditions who don’t go for treatment?

• Who else is involved with these FSWs?

• What are the long term problems such FSWs have?
8. Prevention

- How do FSWs prevent themselves from these conditions
- Are condoms available locally and who provides

9. For a health care provider add:

- Function of the health facility (general HC, specialist clinic etc)
- Who uses it (geographical population served, particular groups)
- Organization (who sees the people what facilities, payment, availability of drugs)
- What are the most common conditions (STIs) and how do they present?
- How do FSWs understand these conditions?
- How long do FSWs wait prior to consulting you?
- Where do you think FSWs go first when they have symptoms?
- What other sources of care are there for FSWs with these conditions (STIs)?
- What are the main obstacles to FSWs attending early on in the course of an infection?

9. Other health care providers: (ask about others)

- What they think the role is of eg. Pharmacies, herbalists etc.
NB// at the end of the interview ask for suggestions for other local people to talk to.

In addition to the interview information, the following should also be recorded:

a) Where the interview takes place

b) How long it lasted

c) Who else was present or may have been listening/watching

d) How easily the informant talked about the issues, whether they seemed confident and well informed about their area.
Appendix 4: Consent Form

My name is Miriam Wanjiru Ngure and I am conducting a study on health seeking behaviour for key reproductive tract infections to establish socio-economic, socio-cultural and environmental determinants as well as assess the level of knowledge of key reproductive infections and their prevention measures among the female sex workers in Eldoret municipality, Uasin-Gishu County.

The study is in partial fulfillment of my academic requirements. You will provide crucial information that will assist in devising strategies for ensuring that effective STIs control programmes for female sex workers are well implemented in the future. In addition, you will be advised on health facilities where you can access health care and you will receive knowledge on the STIs symptoms, signs and prevention measures. I don’t envisage any negative consequences for you in taking part. It is possible that talking about your experience in this way may cause some distress.

In this regard I am kindly requesting for your participation by answering a few questions related to the study which will take about 30 minutes of your time. In addition, your participation in this study will be on a voluntary basis and will not attract any financial rewards. The information given by you will be treated with utmost confidentiality. To further safeguard your confidentiality, your name will not be included in this form. The information will not be shared or given to anyone except to the KU ERC, MOH, National Council and two supervisors. (Respond to any concerns that the respondent may have).
Respondent response

I have read the foregoing information, or it has been read to me and have understood the information. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this study.

Signature/Right thumb print: ________ Date of interview: _______

Site: __________________________

Person Administering Consent:

I have accurately read out the consent information to the potential participant, and to the best of my ability made sure that the participant understands the benefits and risk of the study to her.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Signature………………………………………

Date  ………………………………………

In case of more enquires contact Miriam Wanjiru Ngure (Principle investigator) on Cell phone: 0723103053 or KU-ERC: Email; ercku2008@gmail.com; Tel: 8710901/12
Appendix 5: The map of study area
Appendix 6: Ethical Clearance from Kenyatta University Ethical Review Committee
Appendix 7: Research Authorization from National Council for Science and Technology
Appendix 8: Research Permit