Factors Associated with the Utilization of Health Services by Female Sex Workers in South Africa

Helen Savva

Student Number: 8063766

Supervisors:

Dr Nicola Christofides

Prof Matthew Chersich

Ms Marlise Richter

A research report submitted to the School of Public Health, University of the Witwatersrand in partial fulfillment of the requirements for the degree of Master of Public Health.

23 May 2013

Declaration

I, Helen Savva, declare that this research report is my original work. It is submitted in partial fulfillment of the requirements for the degree of Master of Public Health, in the field of Social and Behavior Change Communication, in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to this or any other university.

23 May 2013

Abstract

Introduction: Female sex workers (FSWs) have unique health needs. However, there are political and socio-economic factors that facilitate or hinder their access to health services. The overall objective of this study was to examine factors that influence FSWs' utilization of and satisfaction with health services in four settings in South Africa for the period April to August 2010. In addition, the study examined type of health service accessed, and reason for visiting these services.

Materials and methods: This is a secondary analysis of data from a cross-sectional study on sex work in South Africa. For this study, the population was limited to self-identified FSWs who were of any nationality and older than 18 years. Bivariate and multivariate analysis was conducted to detect associations between socio-demographic factors, family and sex work characteristics, and risk factors with the dependent variables (i.e., frequency of health utilization, proportion of FSWs satisfied with the health services, type of and reason for using health services). Qualitative data were thematically categorized and analyzed to triangulate quantitative results.

Results: More than half of the participants (n=1,909) had used health services in the month preceding the study with over half of those opting for public health facilities. Independent variables that influenced health services utilization included town of residence (aOR 0.38, 95% CI 0.25-0.58), provincial birthplace (aOR 2.58, 95% CI 1.56-3.94), having adult dependents (aOR 1.71, 95% CI 1.17-2.48), and average number of clients in the past week (aOR 2.39, 95% CI 1.37-4.15). Satisfaction with health services was positively associated with education (aOR 2.77, 95% CI 1.36-5.64; 2.16, 95% CI 1.14-4.09) on the one hand, and negatively associated with current city of residence (aOR 0.43, 95% CI 0.24-0.74), and with alcohol consumption (aOR 0.40, 95% CI 0.22-0.72). The primary motivation for using health services was for HIV, sexually transmitted infections, and tuberculosis (53.3%), with the least cited reason being counseling and advice (8.9%). More than 80% of the participants were satisfied with the health services. Qualitative data were used to triangulate the results of the quantitative data and highlighted additional factors influencing health services utilization. Important emerging themes included discrimination and self-stigmatization, health worker attitudes, as well as the importance of confidentiality and privacy.

Conclusions: Overall, the findings in this study show associations between age, education and geographic factors; partners and adult dependents; workplace, earnings, and number of clients; alcohol use; and the outcome variables of health services utilization, satisfaction, selection of health

service and reason for using health services. In addition, thematic analysis of FSWs' narratives reveals the importance of health provider attitudes, and external and internal discrimination and stigma in influencing access to health services.

Acknowledgements

First and foremost I offer my immense gratitude to my supervisor, Dr Nicola Christofides. Thank you for your expert guidance in helping me refine, focus and write this paper. I definitely would not have made it up this very steep learning curve without your expertise, cups of coffee, and many chats!

To Prof Matthew Chersich, I extend my thanks for your constant encouragement and insightful comments. These have all made this a much better product.

My thanks also go to Marlise Richter, firstly for sharing your dataset, and secondly for your patience and for answering my many questions.

Kim Trollip, thank you for your support and stalwart patience, for your willingness to proofread this paper, and for supporting me through the ups and downs along this path. I would not have reached the chequered flag without your help and support.

To my Karoo, Tusk, and Phoenix, thank you the long hours spent lying at my feet, helping me write and for breathing very heavily on me during the December 2012 and January 2013 heat-waves in Gauteng.

Table of Contents

List of Tables

Figures

Nomenclature

Sex worker: Sex workers are defined as "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" (1 p.8). Transactional or survival sex often occurs in Africa, but is differentiated from sex work in that the person who engages in transactional sex does not self-identify as a sex worker, nor is he or she viewed as such by their communities (1). The operational definition of sex work used by the primary study is self-identified sex workers engaged in "adult commercial sex work" (as distinct from sex trafficking and child prostitution, neither of which involves choice) and "the exchange of sexual services for financial reward", a definition provided by Gould & Fick as cited in Richter et al. (2).

Health service in the primary study refers to any health service used by sex workers, and includes hospital, clinic, doctor, nurse, traditional healer, counselor, or peer educator (2).

Chapter 1: Introduction, Aims and Objectives, and Literature Review

Chapter 1 provides an overview of the extent of sex work globally and in South Africa. It describes the characteristics of and health issues experienced by female sex workers (FSWs) as well as their access to health services. Women in the sex industry are a key population in the transmission dynamics of HIV but also experience unique physical and mental health problems, which are often specifically related to their occupational and gender context. These health problems are frequently not addressed by the health system. The aims and objectives of this study – a secondary data analysis that describes factors that influence FSWs' access to and use of health services in four settings in South Africa – is provided. The conceptual literature review describes studies of and theories that influence health-seeking behavior and health services utilization with particular reference to marginalized populations. The chapter concludes with a problem statement and justification for the study.

1.1 Introduction

Sex workers (SWs) are defined as "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" (1 p.8). Transactional or "survival" sex often occurs in sub-Saharan Africa, but is differentiated from sex work in that the person who engages in transactional sex does not self-identify as a SW, nor is he or she viewed as such by their communities (1). Furthermore, the distinction between commercial sex work and transactional sex in South Africa is often blurred: some women exchange sex for goods or material items but do not identify as SWs. One study in Soweto showed that as much as 20% of women attending an antenatal clinic reported having transactional sex, but did not identify as SWs (3).

Although sex work is criminalized in South Africa, it appears to be common and takes various forms, ranging from street-based SWs to those in higher socio-economic levels who work from escort agencies or massage parlors (4). The clandestine nature of sex work, however, makes it difficult to determine the true extent of the industry and few studies provide clear estimates of the size of SW populations in Africa and in South Africa. The SW population is also marked by high mobility, with SWs moving in response to large events, seasonal laborers and tourists, and frequent entry into and exiting the industry, increasing the difficulty of assessing actual numbers of SWs (5, 6). There are

also a number of women who engage in “part-time” sex work, but who are less likely to self-identify as SWs (5).

Socio-demographic characteristics and reasons for entry into the industry vary widely (4), but in Africa the World Health Organization (WHO) characterizes FSWs as being from low socio-economic levels, having high mobility, often moving from rural to urban areas in search of employment (and turning to sex work when there is no other employment), and being victimized or abused due to unequal gender relations (1). The WHO estimates that SW populations are generally concentrated in urban areas, port cities and on trucking routes (7).

Although much of the current literature focuses on FSW’s health issues in the context of HIV, women engaging in sex work experience the same reproductive, physical (sexual and non-sexual) and mental health issues as other women. These issues, however, are often exacerbated by their occupational context, which involves frequent and multiple sexual encounters, and associated lifestyle risk factors such as violence, inconsistent condom use, alcohol and substance abuse, and exposure to smoking (8, 9). There is evidence that women in sex work also have unique physical problems such as viral infections, associated with frequent sexual encounters with multiple partners or excessive alcohol and drug use that can lead to chronic viral problems like genital herpes and hepatitis leading to liver failure (1, 10). Studies show that FSWs have pronounced reproductive health problems that include a higher risk for inflammatory pelvic disease, high rates of unwanted pregnancies and accompanying unsafe abortions, as well as high rates of mother-to-child HIV transmission and maternal mortality rates (10, 11).

Paid sex is a critical factor contributing to the growth of the HIV epidemic. Infection often manifests first among the SW population (1) and the WHO (12) states that unprotected commercial sex remains a significant factor even in mature HIV epidemics, where the virus is easily spread from male clients to their wives or girlfriends.

Although the HIV epidemic has stabilized or declined in many parts of the world, sub-Saharan Africa continues to be disproportionately affected with approximately 23.5 million (69%) of all infected people living in a region that is home to a mere 12% of the world’s population (12, 13). South Africa, with 5.6 million infected people has the largest HIV epidemic in the world (14). Estimates of HIV prevalence among SWs vary widely -- ranging from 0.5% in Madagascar to 70.7% in Malawi (14) -- but UNAIDS (15) estimates that the global prevalence is 12%, and in general HIV prevalence among SWs and their clients is often 10 to 20 times higher than among the general population (1). South

African statistics are sparse, with studies showing HIV infection rates among SWs ranging from 24.7% (16), to 68.6% (17). According to the South African National Strategic Plan on HIV, STIs and TB, 2012-2016 (NSP) SWs and their clients are high HIV risk groups, with 19.8% of all new HIV infections in South Africa being related to sex work (18). Researchers agree that the number of HIV-infected SWs in South Africa is high, particularly among the large "hidden" population (3, 19).

Women are particularly vulnerable to HIV infection due to biological susceptibility as well as social and economic determinants (20). Furthermore, women in sub-Saharan Africa account for 59% of all people living with HIV (21), and in stark contrast to the declining epidemic among other populations, the number of South African women who are HIV-infected has grown from 2,6 million in 2001 to 3.3 million in 2009 (14). As with other physical ailments, FSWs' vulnerability to HIV and other sexually transmitted infections (STIs) is exaggerated by their occupational context characterized primarily by poverty, violence, and high-risk behaviors (5). Women who engage in sex work are even more vulnerable to HIV and STIs than other women because of the high rates of sexual partners, frequently characterized by violence and unprotected sex (16, 22, 23). In addition, more than 50% of FSWs may have a curable STI at any one time, once again, increasing their biological vulnerability to HIV infection (7).

FSWs often have mental health problems, often attributable to the clandestine and highly stigmatized nature of the occupation and the resulting social exclusion and isolation (24). Significant mental health problems include depression, psychosis, eating disorders, and substance and alcohol addiction (10).

Alcohol use is recognized as a primary risk factor associated with commercial sex. Alcohol is both a reason for entry into the industry, and also a mechanism for lowering inhibitions and coping at the time of selling sex (5, 25). Research shows that the high volume and regular use of alcohol impairs decision-making abilities and condom negotiation skills, which results in risky sexual behavior and heightened vulnerability to violence from clients, pimps, or partners (1, 4, 5, 23, 26).

WHO and UNAIDS concur that condoms are the "… single most effective available means for reducing sexual transmission of HIV" (1 p.23) but there is inconsistent condom use by FSWs globally (7). Studies show that the use of condoms is linked to the Health Belief Model's construct of perceived susceptibility, and that although FSWs used condoms with clients, they were less likely to use condoms with regular clients, those that looked "clean", and with steady partners (27-29). Lack of condom use is primarily due to refusal by clients, and this is often accompanied by offers of higher

payment or the threat or use of violence (1, 5, 7). Furthermore, some FSWs view condomless sex as a rational approach to making more money, albeit a risky one (4, 30).

Gender inequality in society frequently results in low or inferior education levels and consequently, limited options for employment for women, which makes sex work an easy option to earn a living (24). This inequality, in addition to structural factors such as the clandestine nature of sex work promotes high health risk behaviors such as alcohol and substance abuse, and inconsistent condom use (22). Criminalization, which often results in unsafe work areas, lack of protection from the justice system, make FSWs easy targets for violence, extortion, and particularly vulnerable to physical injuries through violence, rape, and sexual assault by clients and intimate partners, as well as by law enforcement officers (1, 24).

FSWs' health needs are clearly multiple, ranging from basic biological health services; reproductive health needs (e.g., family planning and pap smears); provision of condoms and other STI prevention; treatment of reproductive tract infections; provision of safe contraceptive and abortion services, to alcohol and substance abuse rehabilitation and counseling and harm-reduction education on the physical and psychological effects of violence from clients, pimps, and partners (8).

However, despite their high health needs, marginalized populations (like SWs) often have less access to health services than the general population (31). WHO estimates that only a third of SWs in Africa receive HIV prevention services and even fewer have access to adequate HIV care and treatment (1). In South Africa, the Sex Worker Education and Advocacy Taskforce (SWEAT) estimates that only 5% of SWs have access to adequate health services primarily due to negative health workers' attitudes (32). In addition, Luseno et al. (33) found that high-risk HIV-infected women in South Africa are less likely to use health services due to denial of HIV status, lack of awareness of available treatment and care options, no or little understanding of how to access services, and poor access to services due to lack of financial or other material resources. In addition, inconvenient service hours and stigma associated with sex work may negatively impact health-seeking behavior (11).

Clearly, utilization of and access to health services is complex. Several models and theories predicting or explaining health services utilization have been developed; these include a focus on diverse factors ranging from economics, culture, physical access, illness beliefs and perceptions, knowledge, socio-demographic factors and gender and social roles (34).

Ronald Andersen's Healthcare Utilization Model is a commonly used theoretical framework that proposes that the use of health services is facilitated or impeded by three factors: predisposing, enabling, and need (34, 35). Predisposing factors include socio-demographic factors; enabling factors are the resources or barriers that allow or impede access to health services (e.g., availability of services, accessibility and acceptability of services, including staff attitudes); and finally, illness is the need variable, including perceived illness and personal evaluations about one's health status and need for care (36).

Although there are different definitions of health needs, the societal typology as conceived by J. Bradshaw and cited by Asadi-Lari et al. (37) is the most fitting for this model. Bradshaw defined types of need as (a) normative (what everyone else does, such as country-wide vaccinations); (b) felt (perceived, wants, wishes, and desires); (c) expressed (i.e., the actual use of services, or turning the felt need into action); and (d) comparative (i.e., the needs arising in one location may be similar to the needs among other similar population groups in different geographic locations) (37).

The basic Andersen model has evolved over time to include the health system and societal and environmental influences as important determinants of use of health services (34). The expanded Gelberg-Andersen Behavioral Model for Vulnerable Populations is particularly applicable to marginalized populations like SWs (31). The latter not only includes the normative predisposing, enabling and need factors, but these are expanded to encompass specific vulnerabilities found in marginalized communities, such as homelessness and high-risk behaviors such as alcohol abuse (31). This model was originally tested among homeless women, but has since been applied to other marginalized groups such as injecting drug users and FSWs (36, 38). An adaptation of this model -- for the purposes of this study -- is shown in Figure 1. In this definition, need is shown as having a reciprocal relationship with health services utilization.

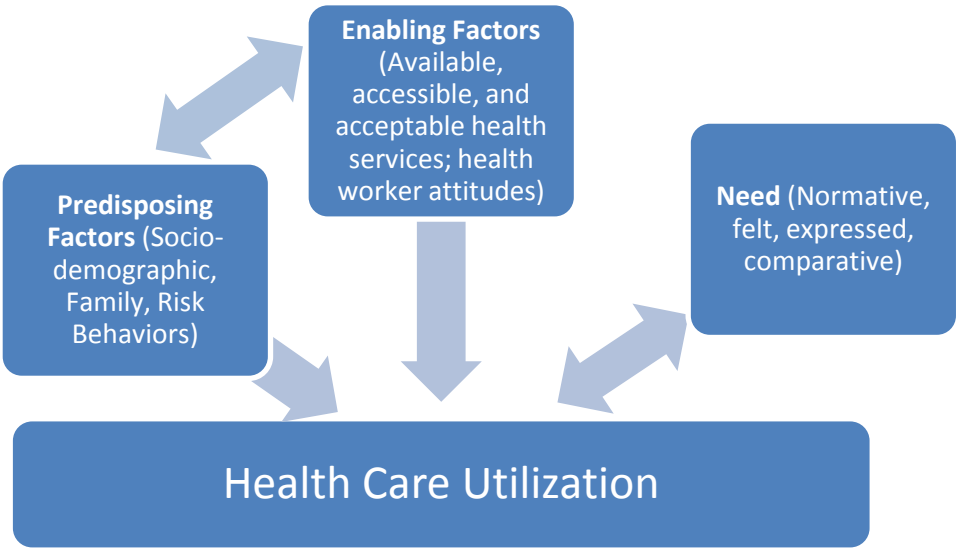

Figure 1. Adapted Gelberg-Andersen Healthcare Utilization Model for Vulnerable Populations

1.2 Aims and Objectives

In this study, FSWs were situated within the context of their unique health needs and the political and socio-economic factors that facilitate or hinder access to health services. The overall objective of this study was to examine factors that influence FSWs' utilization of and satisfaction with health services in four settings in South Africa during the period April to August, 2010. In addition, the study examined type of health service selected by the study sample, and reason for visiting the health service. Specifically, the study aimed:

- To describe characteristics and predisposing factors that influence health services utilization and satisfaction with services among FSWs in 2010 in four sites in South Africa including:
    - Socio-demographic characteristics;
    - Family characteristics;
    - Characteristics of sex work; and
    - Health risk behaviors (i.e., alcohol and inconsistent condom use).
- To describe the resources that enable or act as barriers to utilization of and satisfaction with health services by FSWs in 2010 in four sites in South Africa by:
    - Determining the utilization of and satisfaction with health services following visits by FSWs' to health services in the month prior to the data collection;
    - Determining the type of health service used by FSWs in the past month;

  - Determining the reason for visiting the health service in the past month; and
  - Describing perceptions of health services by FSWs in South Africa.
- To detect associations between socio-demographic, family and sex work characteristics, and high-risk behaviors, and the utilization of and satisfaction with health services among FSWs in 2010 in four sites in South Africa.
- To detect associations between socio-demographic, family and sex work characteristics, and risk behaviors, and type of health service.
- To detect associations between socio-demographic, family and sex work characteristics, and risk behaviors, and reason for visiting a health service.

1.3 Literature Review

This conceptual literature review draws on representative studies that examine socio-demographic factors, high-risk health behaviors, and other factors in relation to health services utilization by FSWs. The focus was narrowed to sub-Saharan Africa and South Africa where possible. The literature was also reviewed to identify theories and frameworks that influence health care utilization by FSWs and other marginalized groups. The literature provides evidence for several predisposing and enabling factors such as risky health behaviors, high mobility and migration status, alcohol and substance abuse, gender inequities and structural factors, including criminalization of the industry that influence the health of FSWs and their subsequent utilization of health services (8, 23).

1.3.1 Socio-Demographic Factors

A systematic literature review of four African countries, including South Africa, found that the average age of SWs was between 24 and 31 years, and that embarking on sex work at a younger age heightened the individual's risk for HIV infection (5). A South African study found that the mean age for FSWs was 26 years with a range of 17 to 45 years (39). Age may be considered a predisposing factor affecting health services utilization. For example, a study of FSWs' health utilization patterns in Nepal suggested that women older than 25 years were more likely to use reproductive health services (40), while a Tanzanian study found that being between 22 and 25 years was significant predictor for FSWs using treatment for STIs (41).

Education is also a predisposing factor influencing the use of health services. A study of the Avahan project in India found that FSWs who were illiterate remained unaware of community-based health projects unless they had face-to-face communication with peers or social organizers (42), and

Luseno et al. (33) add that in addition to lacking information about where to go for health services, marginalized groups with low education levels may not understand how to access services.

Several studies indicate that FSWs come from disadvantaged socio-economic backgrounds and may choose sex work as an easy income option, especially those with dependents or with lower education and skills levels (5, 7). A Cape Town study revealed that more than three-quarters (76%) of SWs turned to sex work for money (43), and a study among a group of FSWs working along a trucking route in KwaZulu-Natal indicates that many women engage in sex work to support dependents (4). Ironically, the socio-economic conditions that make sex work a viable option often work against FSWs: a study in Uganda found that poorer women working on the trans-Africa highway were less able to negotiate higher prices or safer sex (39) making them more vulnerable to violence and exploitation, and health problems. In addition, because women are often occupied with survival, taking care of the home, and an imbalance in gender-based power they have limited access to and information about health services (20), thus restricting access.

The high mobility of FSWs may also be due to high turnover of FSWs with frequent entry into and exit from sex work, making this a highly transient population group. Typically, women in sub-Saharan Africa only remain in the industry for three years, which requires renewed outreach and prevention programs and interventions to influence the constantly renewed pool of workers (5). The high mobility of FSWs is also due to high levels of migration and political displacement or in response to seasonal demand such as large international events which draw crowds of people from other countries, and migratory workers (5, 7). In southern Africa FSWs are often linked to main transport routes or border towns, and these factors, in addition to the fluid mobility of FSWs may hinder access to primary health care services (5). Migrants or political refugees also frequently face obstacles to accessing HIV information, antiretroviral treatment and condoms as they may be turned away from these services on account of being a foreigner (5), and occupational stigma may compound such barriers (10). The high levels of mobility among SWs generally lead to chaotic lifestyles, which in turn also affect access to health care services and perceptions of health needs (5).

1.3.2 Health Service Needs

Evidence shows that consistent condom use protects FSWs from HIV and other STIs. Client pressure for condomless sex remains the single most common reason for non-use (39), with a Madagascan study providing evidence that one in five FSWs were afraid to ask their clients to use condoms and nearly three quarters of the study participants reported regular sex without condoms (5). Wojcicki

and Malala (30) cite two South African studies – one along truck stops in KwaZulu-Natal, and the other in the Free State Goldfields – where women reported not using condoms for fear of violence from clients.

Alcohol abuse and substance use were found to affect negatively Pretoria-based FSWs' ability to negotiate condom use (22). Studies also show that partner type affects condom use: FSWs may forgo use of condoms with regular clients, those that look "clean", or with steady partners due to a belief that this indicates trust, loyalty, or love (1, 20, 30). Poor social networks and a lack of organizational support from peers, brothel owners or pimps may reinforce FSWs' low self-efficacy to negotiate condom use: studies show increased condom negotiation skills among groups that demonstrate a "united front" in refusing clients who reject condom use (5). In South Africa free condoms are available at all government-run health facilities (18) and NGOs have expanded access through social marketing (44). In South and southern Africa several peer-led interventions are focused upon the development of FSWs' consistent and correct use of condoms (45), and although several older studies report low condom use by FSWs (4, 44, 46), a recent study reported that self-reported condom use with clients was high at more than 92% (47).

Although there is no evidence of the link between alcohol use and FSWs' utilization of health services, alcohol can impair the ability of FSWs to use health care for dependents (25), and a Pretoria-based study found a considerable need for alcohol rehabilitation services for FSWs (26). A study in Limpopo found that a third (33.3%) of FSWs reported drinking alcohol every day, and 36.5% drank alcohol every week (39). Wechsberg et al. (26) found that Pretoria-based FSWs were more likely to abuse alcohol and other substances, or have a close family member who abused alcohol and illicit substances, but less than 20% of the study sample were aware of any rehabilitation programs. In addition, Wechsberg et al. (48) found that alcohol and other substance abuse contributed to unequal gender relations: Pretoria-based FSWs who used alcohol or other substances reported being at a disadvantage when negotiating sex or safe sex with their main partner, a dynamic which was worsened by economic need (48).

Violence leading to injury appears to be common in the lives of FSWs, and may lead to increased use of and need for emergency health services. In a Pretoria-based study on FSWs, 61% of the participants reported being beaten by a boyfriend, 41% by a client, and 39% were denied payment as agreed by a client (22). The incidence of rape was high – with nearly a third (27%) reported being raped by a client; a fifth (20%) had been raped by a boyfriend; and 15% reported being gang-raped

(22). In a study conducted by SWEAT, most agency-based SWs reported very little contact with the police, while street-based SWs in contrast, spoke of high levels of contact including frequent arrests, physical abuse, and sexual assault and rape (49).

There are few studies on the mental health of SWs, but those that do exist indicate that sex work itself may have a negative impact on the mental health of the women (50, 51). One study, based in Zurich concluded that adult FSWs showed higher rates of ill mental health, particularly anxiety and depression, compared to adult females in the general population, and that these conditions were linked to their working conditions (51). Another qualitative study in the United Kingdom showed that FSWs often accept feeling depressed as part of life, and fearing judgment or disapproval from health providers attempt to self-medicate, often with illegal drugs (52).

Although there is little research on occupational stigma in sex work, some authors have indicated that stigma may increase vulnerability to stress and other diseases (53-55). Stigma is defined by E. Goffman as cited by Lazarus et al. (54) as an "attribute" associated with an individual that is deeply discrediting; stigmas are social norms or labels that result in individuals being shunned, avoided or discriminated against (54). In addition, the authors note that stigmatization in itself may lead to low self-esteem or "internalized stigma" (54) with associated labels of low moral worth, shame and blame, all leading to increased levels of stress and depression, as well as learned helplessness (55). This sense of helplessness may manifest in lack of personal health protection such as the lack of self-efficacy to negotiate safe sex or the ability to recognize health issues (40, 54).

Structural factors such as criminalization of sex work may influence access to health services. In South Africa sex work is criminalized under the Sexual Offences Act (23 of 1957) (49) and municipal by-laws are commonly enacted and used to arrest and control SWs in municipal areas. Once again, this leads to lack of legal recourse, particularly among illegal migrants, and may inhibit access to basic services, including health care. A study in Australia revealed that more than half of illegal FSWs (compared to licensed FSWs) reported rape or violence from a client in the past 12 months (50). Finally, criminalization of sex work restricts access to health services by limiting the development and implementation of targeted health services, discouraging donor funding for HIV prevention in sex work settings, and consequently, limiting access to condoms and reproductive health information and planning (56).

1.3.3 Health Services Utilization

Hard-to-reach and hidden populations like SWs often have difficulties in accessing health services (8, 33), which may result in poor health outcomes for the individual, and additionally, drive rapid and higher HIV and STI transmission rates among the general population(24). Studies show that frequent utilization of health services by marginalized populations leads to a reduction of risk behaviors and improves the overall health of the population (57).

Stigmatization and moral judgment are major predisposing factors affecting the health of, as well as access to and utilization of health services as SWs fear exposure as being sexually deviant and out of the ordinary (56, 58, 59). Sex work is socially isolating, characterized by high levels of stigmatization and discrimination, as well as unequal power relationships with clients, partners and pimps (30). In addition, negative staff attitudes or unsuitable health services may contribute to inhibiting access to health services (8, 33). In addition to marginalization from mainstream services, Mellor and Lovell state that FSWs may voluntarily withdraw from using health services for fear of judgment or humiliation (52).

Finally, need, or perceptions of illness may constitute an important barrier: studies show that FSWs often delay seeking health services because of lack of knowledge of symptoms of common illnesses or denial of their status until they are incapacitated or unable to work (33, 58, 60).

Consequently, the literature shows that health-seeking behavior among FSWs is determined by several factors. Predisposing factors include socio-demographic and behavioral risk factors described above, while enabling factors include user friendly and targeted physical, reproductive and mental health services to FSWs (8, 26, 55). Kurtz et al. (53) studied the health needs of a group of street-based sex workers in Miami in the United States and distinguished several individual and structural barriers to health services utilization, including the structure of the health system and lack of willingness and negative attitudes of health providers, as well as cost and waiting times. The researchers identified important individual barriers to accessing health services including fear of discrimination and arrest, lack of self-esteem and distrust (53).

1.4 Statement of the Problem

In the early eighties, South Africa moved from a concentrated HIV epidemic that largely focused on a few white gay men to a focus on care, treatment and prevention among the general population, targeting heterosexual activities and mother-to child HIV transmission (61). Since then, South

Africa's marginalized populations have received little attention until very recently with civil society driving some men who have sex with men interventions, but services for SWs have lagged far behind because of criminalization and the associated moralistic societal judgments (62). Stigmatization and discrimination are major predisposing factors affecting the access to and utilization of health services, as FSWs fear exposure as being sexually deviant and out of the ordinary (51, 53, 54).

The South African government had, through the earlier HIV & AIDS and STI Strategic Plan for South Africa, 2007-2011 (63), paid lip service to marginalized populations by promising universal access to HIV prevention, care, and treatment services. While this document identified the importance of higher risk groups such as SWs, men who have sex with men, and injecting drug users, South Africa does not collect routine data on SWs, which could be submitted to the biennial United Nations General Assembly Special Session (UNGASS) reports (64). These data would be invaluable in determining the extent of sex work in South Africa, their health problems, and how to identify and implement relevant programs. In addition, there has been very little research on SWs in South Africa, particularly on their specific health needs beyond HIV (62), resulting in a significant gap in knowledge and the specific health needs and service requirements for SWs.

The current National Strategic Plan on HIV, STIs and TB, 2012-2016 (NSP) (18) specifically identifies key populations – including SWs —– as being key to the transmission of HIV, and as people who are more likely to be exposed to or to transmit the virus. The NSP recommends increased condom dissemination; HIV counseling and testing; a package of sexual and reproductive health services; targeted programs to increase screening and support for key populations and protection of human rights and improved access to justice for key populations (18). To date, however, a coordinated national intervention has yet to be established and the few isolated non-governmental organization (NGO) programs have had minimal impact on the lives of SWs (56).

Understanding factors that influence health services utilization will help to address the current lack of available, accessible, and acceptable health services for FSWs. The unmet needs for health services among SWs exacerbate the HIV transmission dynamics among the general population, and ignore the human and constitutional rights of FSWs and their right to access high quality and relevant health services.

1.5 Justification for the Study

Despite the high health risk of FSWs and evidence that prevention, rehabilitation and other health programs can be highly effective (12), little has been done to provide appropriate health and HIV services to FSWs with their specific needs largely eclipsed by a focus on the generalized epidemic in South Africa. Consequently, lacking a coordinated or national program, only one in three SWs in sub-Saharan Africa receives adequate health services (7). Although there are several advocacy groups lobbying for the rights of SWs in South Africa, the only sex work specific health care program in South Africa is the Wits Reproductive Health and HIV Institute's Esselen Street Clinic in Hillbrow, Johannesburg (24). This study examines the factors that may be associated with and could improve health care utilization and satisfaction among FSWs.

1.6 Summary

Sex work is common around the world and in South Africa. FSWs have a range of preventable health problems including sexual and reproductive health ailments; STIs and HIV infections; injuries due to violence and mental health problems; and these are significantly influenced by their occupational context. Stigmatization and the clandestine nature of their lifestyles encourage high-risk behaviors among FSWs, while criminalization of the industry and judgmental health providers may be significant factors affecting access to health services. FSWs require specialized health services including STI screening and treatment, HIV testing and counseling, post-exposure prophylaxis, access to condoms, treatment and care for those who are HIV infection as well as mental health, reproductive, and empowerment services (8, 56). Empowerment is an essential strategy to respond to the social and structural influences that render the FSW more vulnerable, and include a process where the FSW is taught to responsible action and collective efficacy and agency, to facilitate access to and effective utilization of social and health services (65, 66) . Finally, behaviors and other factors that affect utilization of health services are complex and multi-faceted.

Chapter 2: Methodology

2.1 Study Design

This is a secondary analysis of data from a cross-sectional study on sex work in South Africa. The aim of the primary study was to investigate the demand and supply of adult sex work in four settings located in three official FIFA World Cup host cities in South Africa during 2010. Although the main aim of the primary study was not to investigate health outcomes, several health-related questions were included in questionnaire. The primary dataset was collected through three waves of cross-sectional surveys conducted before, during, and after the World Cup, from April to August, 2010 (2).

New categories and variables were created using the study data, and adapted to meet the study objectives for this secondary analysis. The overall study objective aimed to examine factors that influenced FSWs' utilization of and satisfaction with health services in four settings in South Africa for the period April to August, 2010.

2.1 Study Population and Sampling

The operational definition of sex work used by the primary study is self-identified SWs engaged in "adult commercial sex work" (as distinct from sex trafficking and child prostitution, neither of which involves choice) and "the exchange of sexual services for financial reward", a definition provided by Gould & Fick as cited in Richter et al. (2 p.20).

Data were collected from a systematic non-probability sample (2) of 2,220 participants including transgender (n=77), male (n=98), and female (n=2,023) SWs who were working in the four study settings (67). Forty-one records were incomplete and did not specify gender. Only men, women, and transgender people who were older than 18 years, self-identified as SW, and of any nationality were considered eligible for this study. The sample size was based on funding, and investigators collected 200 interviews per site, for each phase.

For the secondary analysis, the study population was limited to self-identified female SWs who were of any nationality and older than 18 years (n=2,023). For the secondary analysis all male and transgendered SWs were excluded.

2.3 Setting/Context

The primary study was conducted in three South African cities that hosted FIFA World Cup games, and included four sites. Hillbrow, an inner-city suburb in Johannesburg was selected because of its vibrant and large SW presence, while Sandton represented an up-market and wealthier suburb of Johannesburg. The inner-city area provided access to poorer, hotel-based SWs, while the wealthier Sandton area is known for several up-market strip clubs, and is a popular area for street-based SWs. Cape Town is a large cosmopolitan city with a large international tourism market. Cape Town has both street- and venue-based sex workers. Rustenburg, a city in the midst of farming and mining activities is located in the largely rural province of North West. The Rustenburg site was situated in slums within a mining area outside of the city, with the sex trade primarily serving the mining community (2).

The principal investigators in the primary study collaborated with two non-governmental organizations associated with SWs, SWEAT and Sisonke Sex Worker Movement (Sisonke), to identify the study sites and to facilitate access to SWs in these areas. SWEAT and Sisonke have a strong presence in Johannesburg, particularly in Hillbrow, and in Cape Town.

2.4 Data Collection

Data were collected using a questionnaire with closed and open-ended questions and administered face-to-face by trained SWs who were recruited through Sisonke and SWEAT. Forty SWs (ten per study site) were trained as research field workers. Questionnaires were translated from English into four of the most spoken South African languages in the study sites: Afrikaans, isiZulu, isiXhosa, and seTswana.

The administration of questionnaires at the same pre-specified time of day, four days of the week and at identical venues during the three phases of the study was done to ensure comparable procedures and standardization of data collection (47). Each field worker was required to administer 60 questionnaires with a target of 2,400; however, the final number of questionnaires administered was 2,023. The questionnaires were administered at the same time and on the same days to

minimize overlap and the possibility of interviewing the same SW twice. A R20 (US$2[1]) airtime or shopping voucher was given to each participant (67).

2.5 Measurement and Data Sources

The questionnaire comprised 43 open- and closed-ended questions designed to gather information on socio-demographic characteristics and factors associated with sex work, migration history, sexual interaction with last two clients, risk behaviors, and contact with health services during the month preceding the interview (2). The questionnaire is included as Appendix A.

The primary study included questions on:

- Socio-demographic characteristics including age, gender, number of dependents, permanent personal partner, and education level.
- Migration history, including country of birth, (and for South Africans, province of birth), time of migration out of place of birth, and arrival at current study site.
- Characteristics associated with sex work, including start of sex work, prior occupation or employment, current alternative employment, fees for sex services, and regular places of conducting sex work.
- Risky sexual behaviors, including alcohol and condom use.
- Contact with authorities, including frequency and experiences with law enforcement officers and with health providers (2).

The secondary analysis used the Gelberg-Andersen Behavioral Model for Vulnerable Populations as a framework to analyze data from the primary study. The conceptual framework is described in Section 1.1, and depicted in Figure 1.

The following categories were created and used in the secondary study, and were categorized as predisposing or enabling factors within the model:

- Socio-demographic factors: Age, education, country and province of birth, town of residence, nationality, and internal migration within provinces.

[1] http://www.oanda.com/currency/converter/ Exchange rate of US$1 to ZAR 9.42. May, 2013

- Family characteristics: Number of adult and child dependents, and whether the participant had, and was living with a partner.
- Sex work characteristics: Age of entry into the industry, type of sex work, average number of clients, and average fee per client.
- Risk factors: Alcohol and consistent condom use.

Four outcome or dependent variables were used in this study and include:

- Utilization of health services conceptualized as the final product of the Gelberg-Andersen Behavioral Model for Vulnerable Populations; and
- Enabling and predisposing factors including:
    - Satisfaction with health services;
    - Type of health service used; and
    - Reason for visiting health service.

Themes from an open-ended question were explored and thematic analysis carried out. Some factors relating to enabling characteristics as well as need, specifically felt need, emerged from this analysis.

2.6 Data Processing Methods and Data Analysis

For the primary study, data were entered into MS Access database, checked and cleaned (67). The secondary study used the de-identified (participant identifiers were removed) and cleaned dataset.

For the secondary study, the primary dataset was checked and additional recoding and cleaning was done using Stata software (version 12.0, STATA Corp., College Station, Texas, USA). The researcher checked the dataset thoroughly for incongruent values, missing data, and obvious data entry errors, for example, a male visiting the clinic for a pap smear (who had not self-identified as transgendered). Obvious errors were recoded and the dataset saved under another name.

In line with Joubert's (68) recommendations, data were explored through graphical display, aiming to identify strange values or implausible outliers, and these were recoded as missing values. The researcher also consulted with the principal investigators for explanations and retrieval of missing or

incongruent data, and referred to the original "do file" for explanations of data coding. None of the variables included a significant quantity of missing data so these were not considered in the analysis.

An open-ended question, # 36: ("If you visited any hospital, clinic, a doctor, nurse, traditional healer, peer educator or a counselor in the last month, please tell me about your most recent experience?") was post-coded into three of the four outcome variables: satisfaction with service, preference for type of health service, and reason for consulting health services. The questionnaire indicated that the data collector should "probe the participant for what type of service they received, from whom, whether the service provider was friendly or unfriendly." (See Appendix A). This question was also the source of the qualitative data as reported in Chapter Three.

The data were largely categorical and Pearson's chi-squared (χ^2) or Fischer's exact tests using Stata software (version 12.0, STATA Corp., College Station, Texas, USA) were used to detect associations between the independent variables (i.e., socio-demographic factors, family and sex work characteristics, and risk factors) with the dependent variables (i.e., frequency of health utilization, proportion of FSWs who are satisfied with the health services, type of service used, and reason for visiting health services). Consistent condom use and average price were created by combining two variables derived from two sets of questions: "With your last client, did the two of you use a condom?" and "With your second last client, did the two of you use a condom?". Similarly, average fee was calculated by combining last price and second last price, using Stata software.

Data from broader categories were collapsed into narrower categorical variables to ensure more robust results. For example, TB, STIs and HIV were combined into one category to reflect current South African policy, while provinces were combined into "other" to highlight the values of those with study sites. Finally age was collapsed as the size of either very young or old ages were slight, and not able to be used effectively with either chi-square or Fisher's exact tests. These proportions were reported using *p*-values and 95% confidence intervals (CIs).

Multivariate logistic regression models were developed using the two binary outcome variables (i.e., health care utilization and satisfaction) to assess which independent variables predicted the dependent variables of interest, and to determine the strength and direction of these variables.

For all the logistic regression models, independent predictor variables were selected on a basis of theoretical relevance and a p-value<0.2. Age and education were controlled in all the models. These models were developed using a backwards stepwise logistic model, following steps outlined in

Acock's A Gentle Introduction to Stata (69). All significant variables were entered into the model, and at each step the least significant variable was removed until all the remaining variables had a statistically significant contribution to the model. Variables were eliminated based on p-values that were higher than the alpha value (i.e., $\alpha = 0.05$). The likelihood ratio and confidence intervals were also examined for significant changes. The results of the logistic regression models are reported using adjusted odds ratios (aORs) and 95% CIs.

The verbatim narratives captured in response to an open-ended question were thematically analyzed, and some of the pertinent quotations are reflected in Table 12. These qualitative data strengthen the validity of the quantitative data by combining methods to reflect accurately the participants' reality (70). They also reduce the possibility that results reflect only the systematic biases or limitations of a specific source or methods, and allow for deeper understanding of the data (70). Specifically, the comparison of the qualitative data, the literature review and analysis of the quantitative data allows for triangulation of the results. Finally, qualitative research builds a holistic narrative description that informs one's understanding of the "human" side of issues, exploring behaviors, beliefs, perceptions, emotions, and relationships (71), making it ideal for exploring a sensitive topic such as sexual behaviors.

2.7 Ethics

Ethical approval for the primary study (Protocol H100304) was obtained from the University of the Witwatersrand's Human Research Ethics Committee (HREC Non-Medical) (Appendix B), and permission to use these data was obtained from the principal investigator (Appendix C). Ethical approval for the secondary study (M110954) was obtained from the University of the Witwatersrand's Human Research Ethics Committee (HREC Non-Medical), (Appendix D).

Informed consent, ensuring anonymity, was obtained by all participants in the primary study, and all consent forms were delinked from the data collection process (2). Field workers explained the purpose, risks and benefits of the study to potential participants prior the start of the interview. Participants were assigned study numbers to ensure anonymity, and all data were password protected, stored and analyzed by primary study researchers according to the study number only, while paper copies of the interviews were stored in a locked file cabinet (2). In addition, since sex work is criminalized in South Africa, extra care was taken to protect and support participants (2). No information that could be used to identify the participants was collected, and referrals to counseling, health and legal organizations were made if necessary (2).

The secondary data analysis was conducted by the researcher with the guidance from her supervisors. She used a cleaned and de-identified dataset. The dataset was stored on the researcher's laptop, which is password protected, and the data will be retained for a period of two years following the end of the study. Access to the dataset was limited to the researcher and supervisor and the data will not be shared with any other person.

Chapter Three: Results

The overall objective of this study is to examine factors that influence FSWs' utilization of and satisfaction with health services in four settings in South Africa for the period April to August, 2010. In this chapter the socio-demographic, sex work and family characteristics as well as health services utilization, satisfaction, reason for using health services, and type of service are presented using frequency and percentages. Pearson's chi-squared or Fisher's exact tests were used to detect associations between the four outcome variables (i.e., health care utilization, satisfaction with health care services, reasons for using health care, and type of health care service) and the independent variables. Two multivariate logistic regression models were built using the two binary outcome variables (i.e., health care utilization and satisfaction) to detect associations between the independent and dependent variables of interest, and to determine the strength and direction of these variables and any relationships between them. Finally, qualitative data were categorized into themes, and analyzed for new or existing factors that support or add to the results of the quantitative data.

3.1 Characteristics of FSWs

The demographic characteristics of FSWs (n=2,023) who participated in the study are described in Table 1. The mean age of the study sample was 30 years, with a range of 18 to 52 years. Nearly a third (34.16%) of the FSWs were aged between 26 and 30 years. Most had some education: more than half (57.98%) had completed high school and more than a quarter (26.45%) had completed primary school. Only 6.62% of the study sample had received tertiary education or training and 8.95% had no education whatsoever.

Nearly half of the sample was non-South African (44.32%), with FSWs migrating from several African countries, mostly from Zimbabwe (16.43%), followed by Lesotho (9.03%) and Mozambique (5.01%). The data reveal significant internal migration within South Africa, with only 38.93% of FSWs having originated from and living in the current province of study (i.e., Gauteng, North West, and the Western Cape). Nearly a quarter of the migrant FSWs migrated from the Eastern Cape (22.58%), followed by FSWs from KwaZulu-Natal (13.46%) and the Free State (10.03%). Overall, most FSWs in this study sample were born in either the Eastern Cape (22.58%) or the Western Cape (19.96%). The Northern Cape's sparse population is mirrored, unsurprisingly, with the lowest percentage of FSWs

(3.97%) in this sample. Most of the study participants were residing in either Hillbrow (32.33%) or Rustenburg (29.07%), and the lowest proportion lived in Sandton (16.11%).

Table 1. Demographic Characteristics of Female Sex Workers

Characteristics	Frequency	Percentage (%)
Age (years) ***n=2,023***		
18-20	143	7.07
21-25	415	20.51
26-30	691	34.16
31-35	372	18.39
> 36	402	19.87
Mean (SD)	*30 (6.65)*	
Education ***n=2,023***		
None	181	8.95
Primary School	535	26.45
Secondary School	1,173	57.98
Tertiary education	134	6.62
Country of Birth ***n=2,015***		
South Africa	1,122	55.68
Zimbabwe	331	16.43
Mozambique	101	5.01
Malawi	57	2.83
Swaziland	61	3.03
Lesotho	182	9.03
Botswana	84	4.17
Namibia	6	0.30
Democratic Republic of Congo	4	0.20
Zambia	43	2.13
Nigeria	15	0.74
Other	9	0.45
Nationality ***n=2,015***		
South African	1,122	55.68
Non-South African	893	44.32
South African Province of Birth ***n=1,107***		
Eastern Cape	250	22.58
Free State	111	10.03
Gauteng	116	10.48
KwaZulu-Natal	149	13.46
Limpopo	62	5.60
Mpumalanga	60	5.42
Northern Cape	44	3.97

Characteristics	Frequency	Percentage (%)
North West	94	8.49
Western Cape	221	19.96
South Africa: Internal Migration ***n=1,107***		
Originates from study provinces[2]	431	38.93
Originates from non-study provinces	676	61.07
Current City of Residence ***n=2,023***		
Cape Town	455	22.49
Hillbrow	654	32.33
Rustenburg	588	29.07
Sandton	326	16.11

Table 2 describes family characteristics of FSWs. Slightly more than one in six of the study sample had and was living with a permanent partner. The median of child dependents was 3 per FSW, with an interquartile range (IQR) of 1-4, while for adult dependents the median was 3 per FSW, with an IQR of 1-4. Most FSWs had child or adult dependents, with only 22% having no child dependents and 30.1% having no adult dependents.

Table 2. Family Characteristics of Female Sex Workers

Characteristics	Frequency	Percentage (%)
Permanent Partner and Living with the Partner ***n=1,974***		
Yes	286	14.49
No	1,688	85.51
Dependents		
Child ***n=2,020***		
0	445	22.00
1	546	26.99
2	459	22.69
3 or more	570	28.22
Median	*3*	
Adults ***n=2,013***		
0	606	30.10
1	388	19.27
2	442	21.96
3 or more	577	28.66
Median	*3*	

[2] Gauteng, North West, Western Cape

Characteristics of women who engage in sex work, including type of sex work, age of entry into the industry, number of clients, and earnings are described in Table 3. The sample drew similar proportions from FSWs in hotels or brothels (35.85%), street-based (28.87%), and a combination of venues (22.29%), but fewer than 1 in 10 FSWs (8.85%) worked in shebeens or bars. Only 1 in 20 FSWs (4.15%) were working in "other" venues described by the primary study as including the home, massage parlors, and night clubs.

The data shows that most women embarked on sex work before the age of 30 years, with a mean entry age of 24 years and a range of 10 to 49 years. On average FSWs had 15.44 clients per week, and earned an average of South African Rands 226.79 (24.48 US Dollars[3]) per client, with a range of zero to R5,200 (561.30 US Dollars) per client.

Table 3. Sex Worker Characteristics

Characteristics	Frequency	Percentage (%)
Type of Sex Work *n=2,023*		
Hotel/brothel	725	35.84
Street	584	28.87
Shebeen/bar	179	8.85
Combination	451	22.29
Other	84	4.15
Age of Entry into Sex Work *n=1,846*		
10-16	77	4.17
17-18	150	8.13
19-20	338	18.31
21-25	601	32.56
26-30	457	24.76
31-35	158	8.56
> 35	65	3.52
Mean (SD)	*24 (5.41)*	
Number of Clients in the Previous Week *n=2,017*		
0-5	546	27.07
6-10	426	21.12
11-20	609	30.19
21-30	238	11.80
31-40	99	4.91
> 40	99	4.91
Mean (SD)	*15.44 (15.44)*	

[3] Exchange rate of ZAR 9.26 to US$1, http://www.oanda.com/currency/converter/, May 2013

Characteristics	Frequency	Percentage (%)
Average Fee per Client (ZAR) *n=2,022*		
0-100	348	17.21
101-200	463	22.90
201-300	372	18.40
301-400	265	13.11
> 400	574	28.39
Mean (SD)	*226.79 (359.21)*	

Alcohol and condom use were two behavioral risk factors examined in this study. Table 4 shows that nearly a quarter of FSWs (24.55%) in the study sample reported that they never drank alcohol; in contrast, nearly a fifth (18.24%) reported drinking alcohol every day or almost every day. In response to an open-ended question (Table 12), several FSWs reported being injured due to excessive alcohol use, or having a condom burst due to being intoxicated while having sex. For example, one FSW stated: *"I went to Yeoville Clinic after falling on fire because I was drunk and burned my hand. I went when I was still drunk and smelling of alcohol but they didn't insult me."* (Female, 27 years, Hillbrow). Another FSW reports: *"I visited the clinic after a condom burst because I used it while drunk. I was helped and luckily the person I had sex with was not infected. The nurse scolded me for having sex while drunk."* (Female, 40 years, Rustenburg).

Nearly all FSWs (96.93%) in this sample reported using condoms during commercial sex.

Table 4. Risk Behaviors among Female Sex Workers

Characteristics	Frequency	Percentage (%)
Frequency of Alcohol Use (week/day) *n=1,886*		
Never	463	24.55
Once or twice	616	32.66
Weekly	463	24.55
Every day/almost every day	344	18.24
Condom use *n=1,697*		
Used a condom	1,864	96.93
Did not use a condom	59	3.07

3.2 Utilization of Health Services

More than half of FSWs (59.3%) consulted health services in the month preceding the study. The majority (59.21%) used public facilities, which included government-run clinics and hospitals. Just over a quarter of FSWs (26.92%) were reached by NGOs such as the HIV-driven peer educator service run by SWEAT in the month preceding the questionnaire. Fewer than 1 in 20 FSWs consulted private practitioners (8.28%) or traditional healers (5.59%) in the month prior to the study.

The overwhelming reason for visiting health services was HIV, STIs and tuberculosis (TB) with more than half (53.3%) of the participants using health services for one of these reasons. "Other" ailments was the second most common reason for visiting health care services with nearly a quarter of FSWs (24.08%) reporting a variety of illnesses and health needs such as oral health, injury and trauma, colds and respiratory ailments, headaches, and high blood pressure. Reproductive health services used included family planning, pap smears, and abortions. This was the third most common motivation for using health services (13.69%). Counseling and advice was the least cited reason for using health services (8.92%). The latter usually comprised HIV counseling, emotional support from peer educators, or consultation with traditional healers for luck or charms to improve business. One woman reports: *"I was going to a traditional healer because my business was very slow. So was going to take a charm so that my business it can be very fast. And he treat me very special."* (Female, 35 years, Hillbrow).

Only five respondents indicated that the information was private and they were not prepared to share the information, as reported by a respondent: *"I visited a traditional healer but I can't explain myself why it's personal."* (Female, 29 years, Sandton). In response to an open-ended question, 15 respondents (n=889) specified that they did not use health services because they did not get sick: *"I am a very strong woman. I'll never get sick."* (Female, 22 years, Hillbrow). A further three respondents pointed to unmet need, indicating that that they either did not expect to be treated or were afraid to use the services: *"I am scared to go their cause they treat my friend badly and they even didn't give her ARVs treatment. Look now she is dead because they didn't want to give her the treatment early."* (Female, 34 years, Hillbrow).

More than 80% of FSWs in this sample reported that they were satisfied with the health services that they receive.

Table 5. Utilization of Health Services by Female Sex Workers

Characteristics	Frequency	Percentage (%)
Health Care Used (in the past month) *n=1,909*		
Yes	1,132	59.30
No	777	40.70
Health Service *n=937*		
NGO/Outreach	231	26.92
Clinic/Hospital	508	59.21
Private	71	8.28
Traditional Healer	48	5.59

Characteristics	Frequency	Percentage (%)
Reason for Visiting Health Service *n=818*		
Counseling/Advice	73	8.92
HIV/STI/TB	436	53.30
Reproductive Health	112	13.69
Other	197	24.08
Satisfaction with Health Service *n=701*		
Good	563	80.31
Bad	138	19.69

3.3 Associations between Characteristics of FSWs and Health Services Utilization, Satisfaction, Type of Health Care Service, and Reasons for Using Health Services

Pearson's chi-squared or Fisher's exact tests were conducted to detect associations between characteristics of FSWs and their reported use of health services. Several categories describing characteristics of the sample population in Section 3.2 were combined to ensure more robust results. . For example, TB, STIs and HIV were combined into one category to reflect current South African policy, while provinces were combined into "other" to highlight the values of those with study sites. Finally age was collapsed as the size of either very young or old ages were slight, and not able to be used effectively with either chi-square or Fisher's exact tests.

Table 6 shows the associations between characteristics of FSWs and the use of health services. Age was significantly associated with health services utilization ($p=0.02$). Women between 26 and 30 years were significantly more likely to use health services. In contrast, women older than 30 years were significantly less likely to use health services with only 36.13% using health services compared to 42.21% who did not use health services.

The geographic factors — province of birth and current city of residence — were significantly associated with health services utilization. Women who were born in the North West were significantly less likely than those born in the Western Cape or the Eastern Cape to use health services ($p<0.001$). Only 5.6% of women from the North West used any form of health service. In direct contrast, 24% of women born in the Western Cape were likely to use health services, compared to 11.57% of FSWs from the same province who were less likely to use health services.

Capetonian and Hillbrow women were significantly more likely to use health services ($p<0.001$). More than double the proportion of women living in Hillbrow were likely to use health services (42.84%) compared to 21.49% who did not use services. In contrast, the opposite was observed in

Rustenburg where only 19.08% of FSWs were likely to use health services opposed to 42.73% of women who did not use health services.

Two family characteristics were associated with using health services. Women who had and were living with a permanent partner were more likely than those not living with a partner to utilize health services (p=0.003). Although having child dependents was not associated with health services utilization, having adult dependents was, with the more adult dependents, the higher the likelihood of using health services (p<0.001). FSWs who had three or more adult dependents were significantly more likely to use health care services (34.46%), than those who did not have adult dependents.

Health services utilization was related to all the sex work characteristics. Establishment-based FSWs were significantly more likely to utilize health services than those who worked on the streets or in "other" or a combination of venues (p<0.001). Women who entered the sex industry between the ages of 21 and 25 years were more likely to use health services, but those who entered the industry later in life (after 30 years) were less likely to use health services (p=0.01). Women who had more than 10 clients a week were also significantly more likely to use health services (p<0.001), while women who had fewer than 10 clients week were less likely to use health care. There was also a significant relationship between earnings and utilization of health services (p<0.001), with lower earners (between R0 and R200; US$0-US$21.32[4]) more likely to use health services. FSWs who earned more than R200 (US$21.32) per client were statistically less likely to use health services.

Levels of education, nationality, internal migration, having child dependents, type of sex work, and risk behaviors were not significantly associated with using health services.

Table 6. Associations between Characteristics of Female Sex Workers and Health Services Utilization n (%)

Characteristics	Used Health Services n (%)	Did not Use Health Services n (%)	p value
Demographic Characteristics			
Age (years) *n=1,909*			
18-25	314 (27.74)	207 (26.64)	0.02
26-30	409 (36.13)	242 (31.15)	
> 30	409 (36.13)	328 (42.21)	

[4] www.oanda.com/currency/converter: based on exchange of US$1 to ZAR9.37; May, 2013

Characteristics	Used Health Services n (%)	Did not Use Health Services n (%)	p value
Education *n=1,909*			
None	99 (8.76)	73 (9.40)	0.37
Primary School	274 (24.20)	207 (26.64)	
Secondary & Tertiary Education	759 (67.05)	497 (63.96)	
Nationality *n=1,903*			
South African	630 (55.80)	425 (54.91)	0.7
Non-South African	499 (44.20)	349 (45.09)	
South Africa: Province of Birth *n=1,040*			
Eastern Cape	134 (21.44)	97 (23.237)	< 0.001
Free State	58 (9.28)	44 (10.60)	
KwaZulu-Natal	96 (15.36)	49 (11.81)	
North West	35 (5.60)	57 (13.73)	
Western Cape	150 (24.00)	48 (11.57)	
Other	152 (24.32)	120 (28.92)	
South Africa: Internal Migration *n=1,040*			
Originates from study provinces[5]	248 (39.68)	155 (37.35)	0.45
Originates from non-study provinces	377 (60.32)	260 (62.65)	
Current City of Residence *n=1,906*			
Cape Town	264 (23.32)	140 (18.02)	< 0.001
Hillbrow	485 (42.84)	167 (21.49)	
Rustenburg	216 (19.08)	332 (42.73)	
Sandton	167 (14.75)	138 (17.76)	
Family Characteristics			
Living with Partner *n=1,865*			
Yes	185 (16.76)	90 (11.83)	0.003
No	919 (83.24)	671 (88.17)	
Number of Dependents			
Child *n=1,906*			
0	226 (20.00)	178 (22.94)	0.27
1	313 (27.70)	195 (25.13)	
2	270 (23.89)	172 (22.16)	
3 or more	321 (28.41)	231 (29.77)	
Adult *n=1,900*			
0	260 (23.09)	295 (38.11)	< 0.001
1	214 (19.01)	141 (18.22)	
2	264 (23.45)	163 (21.06)	
3 or more	388 (34.46)	175 (22.61)	

[5] Gauteng, North West, Western Cape

Characteristics	Used Health Services n (%)	Did not Use Health Services n (%)	p value
Characteristics of Sex Work			
Type of Sex Work *n=1,909*			
Establishment	453 (40.02)	248 (31.92)	< 0.001
Street	304 (26.86)	227 (29.21)	
Combination/Other	375 (33.13)	302 (38.87)	
Age of Entry in Sex Work (Years) *n=1,909*			
10-20	387 (34.19)	294 (37.84)	0.01
21-25	373 (32.95)	202 (26.00)	
26-30	250 (22.08)	186 (23.94)	
> 30	122 (10.78)	95 (12.23)	
Average Number of Clients (past week) *n=1,909*			
0-5	262 (23.14)	245 (31.53)	< 0.001
6-10	217 (19.17)	179 (23.04)	
11-20	352 (31.10)	230 (29.60)	
21-30	164 (14.49)	64 (8.24)	
> 30	137 (12.10)	59 (7.59)	
Average Fee per Client (ZAR) *n=1,908*			
0-100	241 (21.31)	94 (12.10)	< 0.001
101-200	270 (23.87)	165 (21.24)	
201-300	187 (16.53)	167 (21.49)	
301-400	133 (11.76)	117 (15.06)	
> 400	300 (26.53)	234 (30.12)	
Risk Factors			
Consistent Condom Use *n=1,832*			
Yes	1063 (97.52)	712 (95.96)	0.06
No	27 (2.48)	30 (4.04)	
Frequency of Alcohol Consumption (Weekly) *n=1,792*			
Never	280 (25.95)	164 (23.00)	0.14
Once or twice a week	367 (34.01)	224 (31.42)	
Weekly	251 (23.26)	187 (26.23)	
Every day/almost every day	181 (16.77)	138 (19.35)	

Table 7 describes associations between characteristics of FSWs and their satisfaction with health services. Satisfaction data were available for 701 FSWs. Although age was not associated with levels of satisfaction with health services, levels of education were significantly associated (p=0.003). Women with no education were significantly less likely to be satisfied with health care services; only 7.28% were likely to be satisfied compared to 16.67% who were likely to be unsatisfied with the services that they used. Women with some education were statistically more likely to be satisfied with health services.

City of residence was significantly associated with satisfaction (p<0.001). While women in Cape Town, Hillbrow, and Sandton were more likely to be content with the services that they received, women from Rustenburg were significantly less likely to be satisfied with health services, where 18.65% were satisfied compared with 39.86% who were not satisfied. Nationality, birth province, and internal migration were not associated with satisfaction with health services.

Only one family characteristic was associated with being satisfied with health services. Having adult dependents was statistically associated with satisfaction with health services (p=0.03). FSWs who had three or more adult dependents were significantly more likely to be satisfied with health services, while those with two or fewer adult dependents were less likely to be satisfied with health services.

Women working in establishments were significantly more likely to be satisfied with health services, while women who worked on the street were statistically more likely to be unsatisfied with the health services they received (p=0.01). Other sex work characteristics (i.e., age of entry into the industry, average number of clients, and average fee per client) were not associated with satisfaction with health services.

Condom use was not associated with the satisfaction variable but alcohol use was significantly associated with satisfaction. Women who reported drinking alcohol every day or nearly every day were significantly less likely to be satisfied with health services, with 26.72% of regular drinkers less likely to be satisfied compared to 13.44% who were likely to be satisfied with health services (p=0.002). Women who reported never drinking alcohol or only drinking once or twice a week or weekly were more likely to be satisfied with health services.

Table 7. Associations between Characteristics of Female Sex Workers and Satisfaction with Health Services n (%)

Characteristics	Satisfied n (%)	Unsatisfied n (%)	p value
Demographic Characteristics			
Age (years) *n=701*			
18-25	155 (27.53)	37 (26.81)	0.27
26-30	210 (37.30)	43 (31.16)	
> 30	198 (35.17)	58 (42.03)	
Education *n=701*			
None	41 (7.28)	23 (16.67)	0.003
Primary School	144 (25.58)	31 (22.46)	
Secondary & Tertiary Education	378 (67.14)	84 (60.87)	

Characteristics	Satisfied n (%)	Unsatisfied n (%)	p value
Nationality *n=700*			
South African	331 (58.79)	71 (51.82)	0 .14
Non-South African	232 (41.21)	66 (48.18)	
South Africa: Province of Birth *n=399*			
Eastern Cape	68 (20.61)	16 (23.19)	0.41
Free State	32 (9.70)	7 (10.14)	
KwaZulu-Natal	49 (14.85)	6 (8.70)	
North West	19 (5.76)	5 (7.25)	
Western Cape	78 (23.64)	14 (20.29)	
Other	84 (25.45)	21 (30.43)	
South Africa: Internal Provincial Migration *n=399*			
Originates from study province[6]	135 (40.91)	26 (37.68)	0.62
Originates from non-study province	195 (59.09)	43 (62.32)	
Current City of Residence *n=701*			
Cape Town	144 (25.58)	33 (23.91)	< 0.001
Hillbrow	275 (48.85)	45 (32.61)	
Rustenburg	105 (18.65)	55 (39.86)	
Sandton	39 (6.93)	5 (3.62)	
Family Characteristics			
Partner and Living with Partner *n=684*			
Yes	85 (15.48)	27 (20.00)	0.2
No	464 (84.52)	108 (80.00)	
Number of Dependents			
Child *n=700*			
0	96 (17.08)	27 (19.57)	0.22
1	176 (31.32)	35 (25.36)	
2	128 (22.78)	41 (29.71)	
3 or more	162 (28.83)	35 (25.36)	
Adult *n=698*			
0	127 (22.64)	39 (28.47)	0.03
1	110 (19.61)	31 (22.63)	
2	118 (21.03)	35 (25.55)	
3 or more	206 (36.72)	32 (23.36)	
Characteristics of Sex Work			
Type of Sex Work *n=701*			
Establishment	233 (41.39)	45 (32.61)	0.01
Street	135 (23.98)	26 (18.84)	
Combination/Other	195 (34.64)	67 (48.55)	

[6] Gauteng, North West, Western Cape

Characteristics	Satisfied n (%)	Unsatisfied n (%)	p value
Age of Entry in Sex Work (Years) *n=701*			
10-20	199 (35.35)	52 (37.68)	0.41
21-25	181 (32.15)	41 (29.71)	
26-30	132 (23.45)	27 (19.57)	
> 30	51 (9.06)	18 (13.04)	
Average Number of Clients (past week) *n=701*			
0-5	127 (22.56)	28 (20.29)	0.48
6-10	102 (18.12)	26 (18.84)	
11-20	165 (29.31)	48 (34.78)	
21-30	95 (16.87)	16 (11.59)	
> 30	74 (13.14)	20 (14.49)	
Average Fee per Client (ZAR) *n=700*			
0-100	141 (25.09)	23 (16.67)	0.22
101-200	142 (25.27)	33 (23.91)	
201-300	89 (15.84)	25 (18.22)	
301-400	55 (9.79)	18 (13.04)	
> 400	135 (24.02)	39 (28.26)	
Risk Factors			
Consistent Condom Use *n=674*			
Yes	529 (97.60)	128 (96.97)	0.76[7]
No	13 (2.40)	4 (3.03)	
Frequency of Alcohol Consumption (Weekly) *n=674*			
Never	156 (28.73)	28 (21.37)	0.002
Once or twice a week	177 (32.60)	38 (29.01)	
Weekly	137 (25.23)	30 (22.90)	
Every day/almost every day	73 (13.44)	35 (26.72)	

Associations between characteristics of FSWs and the type of health service were analyzed with Pearson's chi-square and Fisher's exact tests and results are reported in Table 8. Type of health service included NGO or outreach groups, public health facilities (i.e., government hospitals and clinics), private services (including self-medication through pharmacies), and traditional healers.

Age was significantly associated with the type of health service selected by FSWs (p=0.04). The 26-30 year age group was significantly more likely to opt for NGOs or public health facilities, while FSWs in the younger group (17-25 years) were more likely to use the services of traditional healers.

[7] Fisher's Exact Test

Current town of residence significantly influenced FSWs' choice of health services (p<0.001). FSWs based in Cape Town and particularly in Hillbrow were statistically more likely to use NGOs and other outreach services, and less likely to use traditional healers. A reverse trend was indicated among FSWs based in Rustenburg and Sandton, who were statistically more likely to use the services of traditional healers and least likely to choose NGOs and outreach services. One of the reasons given for preferring the services of traditional healers as reported in Table 12 was staff attitudes: *"I visited a traditional healer. I had STI. It is better to go to a traditional healer because they are friendly and they treat me nicely. In the hospital if you are a prostitute the nurses are rude."* (Female, 26 years, Cape Town).

The association between average fee per client and health service was highly significant (p=0.005). FSWs who earned less than R100 (US$9.37)[8]per client were more likely to choose NGOs or outreach services and least likely to use the services of traditional healers, while higher earners (more than R400 (US$ 42.56) per client) were more likely to use traditional healers and private services. Confidentiality was often a consideration in selecting traditional healers. One FSW reported: *"I visited a traditional healer because I was having a rash on my private parts. He was good. I didn't go to the clinic because there is no confidentiality."* (Female, 22 years, Cape Town).

Education, nationality, provincial birth place, internal migration, family characteristics, type of sex work, age of entry into the industry, average number of clients, and risk behaviors were not associated with the type of health service used by FSWs.

Table 8. Associations between Characteristics of Female Sex Workers and Type of Health Service n (%)

Characteristics	NGO/Outreach n (%)	Public Facility n (%)	Private n (%)	Traditional Healer n (%)	p value
Demographic Characteristics					
Age (years) *n=858*					
18-25	48 (20.78)	152 (29.92)	26 (36.62)	19 (39.58)	0.04
26-30	95 (41.13)	185 (36.42)	24 (33.80)	13 (27.08)	
> 30	88 (38.10)	171 (33.66)	21 (29.58)	16 (33.33)	

[8] www.oanda.com/currency/converter: based on exchange of US$1 to ZAR9.37; May, 2013

Characteristics	NGO/Outreach n (%)	Public Facility n (%)	Private n (%)	Traditional Healer n (%)	p value
Education *n=855*					
None	16 (6.93)	51 (10.04)	6 (8.45)	3 (6.25)	0.56[9]
Primary School	61 (26.41)	117 (23.03)	19 (26.76)	8 (16.67)	
Secondary & Tertiary Education	154 (66.67)	340 (66.93)	46 (64.79)	37 (77.08)	
Nationality *n=857*					
South African	133 (57.58)	281 (55.42)	39 (54.93)	20 (41.67)	0.25
Non-South African	98 (42.42)	226 (44.58)	32 (45.07)	28 (58.33)	
South Africa: Province of Birth *n=470*					
Eastern Cape	25 (18.80)	51 (18.28)	9 (23.08)	3 (15.79)	0.22
Free State	12 (9.02)	24 (8.60)	3 (7.69)	4 (21.05)	
KwaZulu-Natal	25 (18.80)	41 (14.70)	5 (12.82)	2 (10.53)	
North West	5 (3.76)	16 (5.73)	4 (10.26)	1 (5.26)	
Western Cape	28 (21.05)	83 (29.75)	6 (15.38)	1 (5.26)	
Other	38 (28.57)	64 (22.94)	12 (30.77)	8 (42.11)	
South Africa: Internal Migration *n=470*					
Originates from study provinces[10]	51 (38.35)	118 (42.29)	16 (41.03)	5 (26.32)	0.53
Originates from non-study provinces	82 (61.65)	161 (57.71)	23 (58.97)	14 (73.68)	
Current City of Residence *n=585*					
Cape Town	46 (19.91)	137 (26.97)	14 (19.72)	6 (12.50)	< 0.001
Hillbrow	140 (60.61)	215 (42.32)	26 (36.62)	12 (25.00)	
Rustenburg	18 (7.79)	81 (15.94)	15 (21.13)	11 (22.92)	
Sandton	27 (11.69)	75 (14.76)	16 (22.54)	19 (39.58)	
Family Characteristics					
Living with Partner *n=834*					
Yes	31 (13.90)	85 (17.07)	8 (11.94)	12 (26.09)	0.15
No	192 (86.10)	413 (82.93)	59 (88.06)	34 (73.91)	
Number of Dependents					
Child *n=857*					
0	34 (16.46)	104 (20.47)	14 (19.72)	8 (16.67)	0.54
1	61 (26.52)	150 (29.53)	21 (29.58)	11 (22.92)	
2	56 (24.35)	118 (23.23)	15 (21.13)	12 (25.00)	
3 or more	79 (34.35)	136 (26.77)	21 (29.58)	17 (35.42)	
Adult *n=853*					
0	44 (19.13)	111 (22.02)	16 (22.54)	7 (14.58)	0.06
1	40 (17.31)	110 (21.83)	9 (12.68)	8 (16.67)	

[9] Fisher's Exact Test
[10] Gauteng, North West, Western Cape

Characteristics	NGO/Outreach n (%)	Public Facility n (%)	Private n (%)	Traditional Healer n (%)	p value
2	54 (23.48)	105 (20.83)	16 (22.54)	20 (41.67)	
3 or more	92 (40.00)	178 (35.32)	30 (42.25)	13 (27.08)	
Characteristics of Sex Work					
Type of Sex Work *n=858*					
Establishment	107 (46.32)	185 (36.42)	32 (45.07)	20 (41.67)	0.24
Street	56 (24.24)	134 (26.38)	17 (23.94)	11 (22.92)	
Combination/Other	68 (29.44)	189 (37.20)	13 (22.41)	17 (35.42)	
Age of Entry in Sex Work (Years) *n=858*					
10-20	60 (25.97)	166 (32.68)	29 (40.85)	19 (39.58)	0.47
21-25	89 (38.53)	178 (35.04)	21 (29.58)	16 (33.33)	
26-30	51 (22.08)	107 (21.06)	15 (21.13)	9 (18.75)	
>36	31 (13.42)	57 (11.22)	6 (8.45)	4 (8.33)	
Average Number of Clients (past week) *n=858*					
0-5	40 (17.32)	104 (20.47)	18 (25.35)	13 (27.08)	0.29
6-10	33 (14.29)	103 (20.28)	12 (16.90)	7 (14.58)	
11-20	86 (37.23)	162 (31.89)	23 (32.39)	17 (35.42)	
21-30	43 (18.61)	70 (13.78)	9 (12.68)	9 (18.75)	
> 30	29 (12.55)	69 (13.58)	9 (12.68)	2 (4.17)	
Average Fee per Client (ZAR) *n=857*					
0-100	65 (28.14)	116 (22.88)	13 (18.31)	3 (6.25)	0.005
101-200	53 (22.94)	123 (24.26)	13 (18.31)	7 (14.58)	
201-300	30 (12.99)	83 (16.37)	14 (19.72)	9 (18.75)	
301-400	20 (8.66)	65 (12.82)	5 (7.04)	9 (18.75)	
>400	63 (27.27)	120 (23.67)	26 (36.62)	20 (41.67)	
Risk Factors					
Consistent Condom Use *n=823*					
Yes	220 (97.78)	474 (97.73)	64 (94.12)	43 (95.56)	0.20[11]
No	5 (2.22)	11 (2.27)	4 (5.88)	2 (4.44)	
Frequency of Alcohol Consumption (Weekly) *n=826*					
Never	67 (29.78)	129 (26.49)	15 (22.06)	6 (13.04)	0.14
Once or twice a week	68 (30.22)	174 (35.73)	24 (35.29)	12 (26.09)	
Weekly	54 (24.00)	112 (23.00)	15 (22.06)	16 (34.78)	
Every day/almost every day	36 (16.00)	72 (14.78)	14 (20.59)	12 (26.09)	

[11] Fisher's Exact Test

Reasons for using health services were derived from an open-ended question and categorized into four areas: counseling/advice; HIV, STIs, and TB; reproductive health; and other health problems. The latter included injuries and trauma, oral health, respiratory illnesses and other ailments. Data were analyzed using chi-squared and Fisher's exact tests and results are summarized in Table 9.

The geographical factors, province of birth ($p<0.001$) and city of residence ($p<0.001$) were significantly associated with the outcome variable, reason for visiting health services. FSWs from the Western Cape were significantly more likely to consult health services because of HIV, STIs, and TB, and along with "other" provinces more likely to use counseling and advice. Women from KwaZulu-Natal were more likely to use reproductive health services. Notably, women from the North West were least likely to report using health services for HIV, STIs and TB, reproductive health and other ailments. The results from the current city of residence supported this finding, with women living in Rustenburg, the site in North West, significantly less likely to use services for HIV, STIs and TB, reproductive health and other health issues. Women living in Hillbrow were significantly more likely to use health services for HIV, STIs and TB, reproductive health and other ailments, while Capetonians were more likely to use counseling and advice.

Having adult dependents was significantly associated with reason for utilizing health services ($p=0.005$). FSWs who had one adult dependent were more likely to use counseling or advice services. Women with three or more adult dependents were significantly more likely to use health care for reproductive, HIV, STI, TB and "other" health issues, but less likely to use counseling and advice.

All factors related to sex work were associated with reasons for using health services. Establishment-based FSWs were more likely to use HIV, STI, TB, reproductive and "other" health services, and least likely to use counseling or advice ($p=0.05$). This is in stark comparison to women working on the streets or in other venues or a combination of venues who were more likely to use counseling and advice services. Age of entry into sex work was also significantly associated with selection of health service ($p=0.03$). Women who entered the industry at a very young age (10-20 years) were significantly more likely to use reproductive health services, while women who entered the industry between 21 and 25 years were more likely to use counseling and advice, HIV, STI and TB, and "other" health services. Women who entered the industry at an older age (> 30 years) were less likely to use reproductive health services.

Number of clients (p=0.04) and earnings (p=0.05) were significantly associated with type of health service. FSWs who had many clients (i.e., more than 30 clients a week) were statistically more likely to use reproductive health services and significantly less likely to use counseling and advice services. FSWs who had fewer than 10 clients a week were more likely to use counseling and advice services. In contrast, those with higher earnings per client (more than R400 (US$42.56)) were more likely to use counseling and advice, and less likely to use services for HIV, STIs, TB and reproductive health (p=0.03). The lower earners (less than R100 (US$10) per client) were more likely to visit health services for reproductive or HIV, STI and TB problems; they were least likely to use counseling and advice.

Risk behaviors were not statistically associated with type of health service.

Table 9. Associations between Characteristics of Female Sex Workers and Reason for Using Health Services n (%)

Characteristics	Counseling/ Advice n (%)	HIV/STI/TB n (%)	Reproductive Health n (%)	Other n (%)	p value
Demographic Characteristics					
Age (years) *n=818*					
18-25	17 (23.29)	126 (28.90)	38 (33.93)	54 (27.41)	0.75
25-30	29 (39.73)	174 (39.91)	40 (35.71)	75 (38.07)	
> 30	27 (36.99)	136 (31.19)	34 (30.36)	68 (34.52)	
Education *n=818*					
None	8 (10.96)	30 (6.88)	8 (7.14)	14 (7.11)	0.36
Primary School	22 (30.14)	97 (22.25)	20 (17.86)	49 (24.87)	
Secondary & Tertiary Education	43 (58.90)	309 (70.87)	84 (75.00)	134 (68.02)	
Nationality *n=815*					
South African	45 (61.64)	244 (56.22)	59 (52.68)	91 (46.43)	0.07
Non-South African	28 (38.36)	190 (43.78)	53 (47.32)	105 (53.57)	
South Africa: Province of Birth *n=436*					
Eastern Cape	4 (9.09)	50 (20.58)	9 (15.25)	20 (22.22)	< 0.001
Free State	4 (9.09)	16 (6.58)	9 (15.25)	8 (8.89)	
KwaZulu-Natal	3 (6.82)	35 (14.40)	20 (33.90)	10 (11.11)	
North West	4 (9.09)	11 (4.53)	3 (5.08)	2 (2.22)	
Western Cape	13 (29.55)	72 (29.63)	9 (15.25)	21 (23.33)	
Other	16 (36.36)	59 (24.28)	9 (15.25)	29 (32.22)	

Characteristics	Counseling/ Advice n (%)	HIV/STI/TB n (%)	Reproductive Health n (%)	Other n (%)	p value
South Africa: Internal Migration *n=436*					
Originates from study provinces[12]	22 (50.00)	106 (43.62)	17 (28.81)	37 (41.11)	0.13
Originates from non-study provinces	22 (50.00)	137 (56.38)	42 (71.19)	53 (58.89)	
Current City of Residence *n= 818*					
Cape Town	30 (41.10)	99 (22.71)	11 (9,82)	40 (20.30)	< 0.001
Hillbrow	20 (27.40)	232 (53.21)	65 (58.04)	89 (45.18)	
Rustenburg	9 (12.33)	45 (10.32)	6 (5.36)	22 (11.17)	
Sandton	14 (19.18)	60 (13.76)	30 (26.79)	46 (23.35)	
Family Characteristics					
Living with Partner ***n=798***					
Yes	13 (18.31)	60 (14.12)	15 (13.51)	26 (13.61)	0.78
No	58 (81.69)	365 (85.88)	96 (86.49)	165 (86.39)	
Number of Dependents					
Child *n=817*					
0	12 (16.44)	93 (21.33)	19 (16.96)	39 (19.90)	0.14
1	21 (28.77)	127 (29.13)	32 (28.57)	56 (28.57)	
2	21 (28.77)	97 (22.25)	36 (32.14)	34 (17.35)	
3 or more	19 (26.03)	119 (27.29)	25 (22.32)	67 (34.18)	
Adult ***n=814***					
0	16 (22.22)	98 (22.53)	21 (18.75)	32 (16.41)	0.005
1	21 (29.17)	70 (16.09)	21 (18.75)	32 (16.41)	
2	19 (26.39)	106 (24.37)	15 (13.39)	47 (24.10)	
3 or more	16 (22.22)	161 (37.01)	55 (49.11)	84 (43.08)	
Characteristics of Sex Work					
Type of Sex Work *n=818*					
Establishment	20 (27.40)	197 (45.18)	54 (48.21)	92 (46.70)	0.05
Street	27 (36.99)	100 (22.94)	22 (19.64)	50 (25.38)	
Combination/Other	26 (35.62)	139 (31.88)	36 (32.14)	55 (27.92)	
Age of Entry into Sex Work (Years) n=818					
10-20	20 (27.40)	147 (33.72)	39 (34.82)	45 (22.84)	0.03
21-25	28 (38.36)	158 (36.24)	31 (27.68)	78 (39.59)	
26-30	17 (23.29)	83 (19.04)	34 (30.36)	45 (22.84)	
> 30	8 (10.96)	48 (11.01)	8 (7.14)	29 (14.72)	

[12] Gauteng, North West, Western Cape

Characteristics	Counseling/ Advice n (%)	HIV/STI/TB n (%)	Reproductive Health n (%)	Other n (%)	p value
Average Number of Clients (past week) *n=818*					
0-5	17 (23.29)	99 (22.71)	14 (12.50)	35 (17.77)	0.04
6-10	17 (23.29)	72 (16.51)	24 (21.43)	39 (19.80)	
11-20	26 (35.62)	132 (30.28)	36 (32.14)	71 (36.04)	
21-30	11 (15.07)	72 (16.51)	16 (14.29)	33 (16.75)	
> 30	2 (2.74)	61 (13.99)	22 (19.64)	19 (9.64)	
Average Fee per Client (ZAR) ***n=817***					
0-100	8 (9.59)	115 (26.38)	33 (29.46)	42 (21.43)	0.05
101-200	15 (20.55)	95 (21.79)	19 (16.96)	44 (22.45)	
201-300	15 (20.55)	72 (16.51)	20 (17.86)	32 (16.33)	
301-400	7 (9.59)	57 (13.07)	14 (12.50)	21 (10.71)	
> 400	29 (39.73)	97 (22.25)	26 (23.21)	57 (29.08)	
Risk Factors					
Consistent Condom Use *n=786*					
Yes	67 (97.10)	411 (97.16)	101 (98.06)	187 (97.91)	0.95[13]
No	2 (2.90)	12 (2.84)	2 (1.94)	4 (2.09)	
Frequency of Alcohol Consumption (Weekly) ***n=789***					
Never	12 (17.14)	115 (27.45)	25 (23.15)	55 (28.65)	0.54
Once or twice a week	28 (40.00)	135 (32.22)	43 (39.81)	65 (33.85)	
Weekly	17 (24.29)	103 (24.58)	20 (18.52)	45 (23.44)	
Every day/almost every day	13 (18.57)	66 (15.75)	20 (18.52)	27 (14.06)	

3.4 Multivariate Logistic Regression Models

Two stepwise backwards logistic regression of the dependent variables (i.e., health service utilization and satisfaction with health services) were modeled while adjusting for age and education.

The results of the final model for health service utilization (n=1,033, $p<0.001$) are presented in Table 10. Age, province of birth, current city of residence, number of adult dependents, and average number of clients were significantly associated with the use of health services.

FSWs who were older than 30 years had lower odds -- compared to younger FSWs (18-25 years) -- of using health services (aOR 0.68, 95% CI 0.48-0.95).

[13] Fisher's Exact Test

FSWs born in the Western Cape of were nearly 2.5 times more likely to use health services (aOR 2.48, 95% CI 1.56-3.94) than the reference group, FSWs who were born in the Eastern Cape. Women living in Rustenburg were more than 60% less likely to use health services than those living in the reference group, Cape Town (aOR 0.38, 95% CI 0.25 -0.58).

FSWs with one adult dependent were twice as likely to use health services (aOR 2.09 95% CI 1.42 - 3.09) while those with two dependents were 1.7 times as likely as those without dependents to use health services (aOR 1.70 95% CI 1.18 - 2.45).

Having a greater number of clients was positively associated with health services utilization. FSWs who had between 10 and 20 clients in the week prior to the survey had 1.5 times increased odds of using health services (aOR 1.51, 95% CI 1.04-2.20) compared to the reference group, who had fewer than five clients in the week prior to the study. FSWs who reported having between 20 and 30 clients in the week before the survey were more than twice as likely to use health services than the reference group (aOR 2.39, 95% CI 1.37-4.15).

Table 10. Multivariate Logistic Regression Results for Health Services Utilization, Adjusting for Age and Education (n=1,033, p < 0.001)

Characteristics	AOR[14]	95% CI[15]	p value
Age (years)			
18-25 *(Ref)*			
25-30	1.18	0.69 - 1.99	0.55
> 30	1.01	0.61 - 1.66	0.97
Education			
None			
Primary School	0.87	0.48 - 1.58	0.65
Secondary & Tertiary Education	0.81	0.46 - 1.41	0.45
South Africa: Province of Birth			
Eastern Cape *(Ref)*			
Free State	1.27	0.75 - 2.14	0.36
KwaZulu-Natal	1.22	0.76 - 1.98	0.41
North West	0.22	0.43 - 1.33	0.36
Western Cape	2.48	1.56 - 3.94	< 0.001
Other	1.03	0.69 - 1.53	0.9

[14] Adjusted Odds Ratio
[15] Confidence Interval

Characteristics	AOR[14]	95% CI[15]	p value
Current City of Residence			
Cape Town *(Ref)*			
Hillbrow	1.25	0.79 - 1.99	0.35
Rustenburg	0.38	0.25 - 0.58	< 0.001
Sandton	0.64	0.38 - 1.03	0.10
Number of Dependents (Adult)			
0 *(Ref)*			
1	2.09	1.42 - 3.09	< 0.001
2	1.70	1.18 - 2.45	0.004
3 or more	1.71	1.17 - 2.48	0.005
Average Number of Clients (past week)			
0-5 *(Ref*)			
6-10	1.08	0.73 - 1.60	0.71
11-20	1.51	1.04 - 2.20	0.03
21-30	2.39	1.37 - 4.15	0.002
> 40	1.65	0.97 – 2.78	0.06

Three variables were significantly associated with satisfaction with health services in the second multivariate logistic regression model (n=674, p<0.001). The model was adjusted for age and education, and the results are shown in Table 11. The significantly associated independent variables included education, current city of residence, and alcohol use.

Education was associated with satisfaction with health services: FSWs with primary school education were more than two and a half times more likely to be satisfied with health services than those with no education (aOR 2.77, 95% CI: 1.36-5.64). FSWs who had received secondary or tertiary education were 2.16 times more likely to be satisfied with health services than the reference group (aOR 2.16, 95% CI: 1.14-4.09).

Current city of residence was negatively associated with satisfaction with health services. Women living in Rustenburg were 67% less likely (aOR 0.43, 95% CI: 0.31-0.99) of being satisfied than the reference group, women living in Cape Town.

Alcohol use was significantly associated with being dissatisfied with health services. FSWs who reported regular alcohol use were 60% less likely (aOR 0.40, 95%CI: 0.22-0.72) to be satisfied with health services than the reference group, those who reported never consuming alcohol.

Table 11 Multivariate Logistic Regression Results for Satisfaction with Health Services, Adjusting for Age and Education (n=674, p < 0.001)

Characteristics	AOR[16]	95% CI[17]	p value
Age (years)			
18-25 *(Ref)*			
25-30	1.12	0.67 - 1.88	0.66
> 30	1.12	0.67 - 1.86	0.67
Education			
None *(Ref)*			
Primary School	2.77	1.36 - 5.64	0.005
Secondary & Tertiary Education	2.16	1.14 - 4.09	0.02
Current City of Residence			
Cape Town *(Ref)*			
Hillbrow	1.33	0.78 - 2.29	0.30
Rustenburg	0.43	0.25 - 0.74	0.002
Sandton	1.56	0.55 - 4.41	0.40
Frequency of Alcohol Consumption (Weekly)			
Never *(Ref)*			
Once or twice a week	0.76	0.44 - 1.31	0.32
Weekly	0.74	0.41 - 1.33	0.31
Every day/almost every day	0.40	0.22 - 0.72	0.002

3.5 Qualitative Analysis

Qualitative data from an open-ended question from the primary study (n=889) were thematically analyzed. There were several recurring themes that either mirror those of the quantitative data or emerge as new predisposing, enabling or need factors affecting health services utilization and satisfaction. The themes include alcohol use/abuse, discrimination and stigmatization, quality of health service (including health worker attitudes), human and political rights, preference for type of service, and needs. These themes are presented in Table 12.

Alcohol use/abuse emerged from the women's narratives as a predisposing factor for not using health services, or as a cause of incorrect condom use. Quantitative data show that nearly a quarter of the participants drank every day and that these women had statistically lower odds of using health services. Several FSWs indicated that their health needs were not being met: they reported being turned away or fearing denial of health services because of alcohol. One FSW reports: *"I went to ward 21 to get ARV treatment but they refuse to give me because they say I'm always drinking*

[16] Adjusted Odds Ratio
[17] Confidence Interval

alcohol." (Female, 21 years, Hillbrow). Although nearly all participants (96.93%) reported consistent condom use, some participants felt that alcohol was the reason for incorrect use of condoms, motivating emergency visits to health facilities. *"I like to go to the clinic because as a sex worker I need to check for any infection because we sleep with many men. Sometimes the condoms break because we do business drunk*." (Female, 26 years, Cape Town).

Discrimination and stigmatization emerged as a new theme. Discrimination was perceived to be based on age, migrant status and sex work as an occupation. Age, as a discriminatory factor, was perceived to be either a barrier or an enabler to accessing health services, with one older FSW reported being treated with scorn, while another insisted that she was treated better because of her (older) age. Moral judgment was passed on a young FSW who reported: "*I went to a clinic and they call me a whore because I'm still young …"* (Female, 20 years, Hillbrow).

Although more than 80% of participants reported being satisfied with the health services in the quantitative study, there were several non-South Africans who reported negative attitudes or refusal of service due to migrant status in the qualitative data. Some were refused service *"… because I don't have an ID book"* (Female, 18 years, Hillbrow), while others were told to go "home" for health services. Other FSWs reported discriminatory and bad service deliberately aimed at non-South Africans: *"I experience that if you are not a South African they will treat you bad. If you are sick they ask you in front of people what is your problem and you must tell them, because if you don't, you don't get help until they close."* (Female, 30 years, Hillbrow). In contrast, however, one migrant FSW reported having "… *no problem [with health services] since I came here in South Africa*." (Female, 20 years, Cape Town).

Fifty-eight participants reported unmet health needs due to bad service or outright refusal of service based on stigma because they were a FSW. More than half of FSWs who reported that they were denied service or given bad treatment was from Rustenburg (33 of the 58 participants). One of the FSWs from Rustenburg stated*: "The treatment is bad sometimes. This is because we are sex workers"* (Female, 35 years, Rustenburg). Some FSWs reported refusal to go back to clinics because of negative treatment, *"Yes, the clinic … they were so rude, the nurses. Some of them know me as a sex worker so that is why it is so bad for me and I will never go to that clinic again"* (Female, 24 years, Cape Town), while others used clinics outside of their regular communities, *"… going to a far-away clinic where no one knows me*" (Female, 23 years, Cape Town).

Internalized stigma or low self-worth emerged as a theme which affected the FSWs' expectations of health services. Reports by FSWs showed a clear fear of exposure of their occupation as FSWs. For example, one woman stated that she *"… can't go to the clinic. My auntie works there."* (Female, 20 years, Cape Town). Several FSWs reported being told that they deserve contracting HIV or STIs because of their occupation and labels of risky health behaviors were indiscriminately attached to sex work. For example, one woman was indignant at being falsely accused of smoking and abusing alcohol: *"I visited a hospital because I was feeling ill. That time I was having bronchitis and they say I am smoking and drinking a lot. But I don't do those things."* (Female, 30 years, Hillbrow). Finally, several FSWs anticipated poor service and harsh treatment, and were surprised to be given good service: *"I went to Yeoville Clinic after falling on fire because I was drunk and burned my hand. I went when I was still drunk and smelling of alcohol but they didn't insult me."* (Female, 27 years, Hillbrow).

Quality of health service was an additional emerging theme. Eighty-one percent of FSWs reported being satisfied with the health services in the quantitative study, but several FSWs – in the qualitative study – voiced concerns about the standards and health worker attitudes particularly in public health facilities.

Several FSWs complained about the lack of privacy or confidentiality in public health facilities. One FSW explicitly stated that she preferred seeing a traditional healer to ensure her privacy: *"I visited a traditional healer because I was having a rash on my private parts. He was good. I didn't go to the clinic because there is no confidentiality."* (Female, 22 years, Cape Town).

Health provider attitudes – positive and negative – affected the use of health services. There were several positive reports where *"the nurse treated me nice"* or the doctor was *"friendly and kindly"*. One FSW also reported that she was "*treated like anyone else"*. Some FSWs reported that health workers went a step further to provide health education beyond the routine primary health care services. A FSW, for example, reported: *"I went to the clinic last month. I was menstruating non-stop. The nurse gave me some tablets. They said I had hormone imbalance. I need to eat plenty of fruits and vegetables. The nurses were friendly to me and I was so impressed. I have never heard about hormone imbalance but they had explained it to me and from then I have tried to take care of my diet."* (Female, 36 years, Hillbrow).

Several FSWs reported negative treatment and social exclusion, with the women feeling that health providers thought they were unworthy or undeserving of services. *"The nurse in Paarl shouted at me*

saying I am a whore, I am killing men and innocent people, and I don't deserve medication. In front of people. I must die because I am HIV-positive." (Female, 26 years, Cape Town). Another FSW reported bad service as follows: *"The service was not right at the clinic because when I told the nurse that the condom burst when I was doing business, the nurse call me a name. She said she is not a nurse for sex workers, she is a nurse for the community."* (Female, 25 years, Rustenburg). Some FSWs stated that they were refused health services. Finally, there were several FSWs reporting inaccessible services through long waiting times, inefficient staff, and lack of cleanliness in clinics.

Human rights abuses by authorities (health care providers and police) and by partners were frequently reported in the qualitative data. One woman reported hiding the source of her injury for fear of reprisal: *"I went to the hospital with broken legs after the police threw me under a moving vehicle. I was afraid to tell the nurses what happened to me. They spoke to me nicely because they thought I fell while running along the road."* (Female, 22 years, Sandton). Another reported abuse and underlines her perceived lack of choice: *"I was at Kwamayemaye. I was there for muti to attract clients. The traditional healer gave me some stuff to cleanse myself with and to push the other one inside my vagina with his penis. And I let him without a condom. I had no choice."* (Female, 21 years, Hillbrow).

Injury through interpersonal violence was also commonly reported in the qualitative study with FSWs reporting fights with other FSWs as well as injury by clients and intimate partners: "*My boyfriend beat me. Then my boyfriend took me to the hospital. Then the doctor asked me why I did not open a case for him. That doctor, she was so kind to me."* (Female, 26 years, Hillbrow)

Advocacy groups were perceived as a source of support, particularly as providers of knowledge and protectors of the FSWs' legal and human rights, as described by this woman: *"I met the peer educator to tell the story about the police. They said I must go to the meeting, the creative space, at SWEAT to meet other sex workers and to learn about my rights. I learned a lot that day about my rights. I didn't know nothing about my rights. From that day I know what to do."* (Female, 29 years, Cape Town).

Finally, several FSWs voiced their preference for type of health services including public health facilities, peer educators, private facilities, and traditional healers. Peer educators were viewed in a very positive light: they provided structural support through the provision of condoms, information on health and human rights, but also emotional support through personal visits to hospitals and advice on interpersonal relationships. Several FSWs felt that traditional healers were beneficial in

improving luck or providing charms for better business, and private practitioners were perceived as providing better services for those who could afford them: "*When I am sick my boyfriend takes me to the doctor because the clinic takes a lot of time, and we have no problem with money."* (Female, 25 years, Cape Town)

Clinics that were targeted at SWs were perceived to have pros and cons: some reported that targeted SW services were beneficial, where nurses *"understand what we are going through*" (Female, 40 years, Hillbrow) and nurses *"respect us as human beings not as selling-thing people"* (Female, 29 years, Hillbrow). Esselen Clinic, a SW clinic in Hillbrow, Johannesburg was specifically referred to as providing friendly and accessible services. In contrast several FSWs reported having reservations about dedicated SW clinics, often fearing exposure: *"Because my friend told me that if you go to Esselen Clinic you will regret it because everyone knows that it is a clinic for sex workers only. So I'm scared to go there."* (Female, 30 years, Hillbrow).

Fifteen FSWs claimed that they did not need health care services because they did not or never get sick. One woman stated *"I am a very strong woman. I'll never get sick."* (Female, 22 years, Hillbrow). Others, in contrast, went to the clinic for regular check-ups because "*they were sex workers*".

Table 12. Thematic Analysis of Responses to Open-Ended Question

Category	Participant Responses
I. Alcohol use/abuse	
Alcohol use/abuse as a barrier to health services	I went to ward 21 to get ARV treatment but they refuse to give me because they say I'm always drinking alcohol. (Female, 21 years, Hillbrow)
Inconsistent or incorrect condom use	I visited the clinic after a condom burst because I used it while drunk. I was helped. Luckily the person I had sex with was not infected. The nurse scolded me for having sex while drunk. (Female, 40 years, Rustenburg)
	I always see the peer educator. They give me condoms but sometimes I lose them when I am drunk. (Female, 27 years, Cape Town)
	I like to go to the clinic because as a sex worker I need to check for any infection because we sleep with many men. Sometimes the condoms break because we do business drunk. (Female, 26 years, Cape Town)
II. Discrimination and Stigmatization	
Age – too young or too old to get a STI	I went to a clinic and they call me a whore because I'm still young. I had a STI. They say you are selling your body, that why you have that. I did not answer. (Female, 20 years, Hillbrow)
	A nurse asked me, "where does an old person like me get infected with STIs?" (Female, 48 years, Rustenburg)

Category	Participant Responses
	I go for my infection and get treated nicely because I am old. (Female, 24 years, Cape Town)
Migrants – "… if you are not a South African they will treat you bad"	I was very ill and they refused to help because I don't have an ID book. I went to Zimbabwe for help before I die. (Female, 18 years, Hillbrow)
	I experience that if you are not a South African they will treat you bad. If you are sick they ask you in front of people what is your problem and you must tell them because if you don't, you don't get help until they close. (Female, 30 years, Hillbrow)
	They refuse to help me and tell me to go back to my home in Lesotho or do we not have men in Lesotho. (Female, 43 years, Rustenburg)
	They upset me by asking where I come from and why am I not going to the clinic in Namibia. (Female, 40 years, Rustenburg)
Occupational (sex worker) stigma	They don't treat me good because I am a sex worker. I go to another clinic and they give me good service. (Female, 35 years, Hillbrow)
	The nurses in clinics do not want to treat me because I am working on the streets. Sometimes I go to a far-away clinic where no one knows me. (Female, 23 years, Cape Town)
	I was sick. One friend took me to SWEAT because I can't go to the clinic. My auntie works there. (Female, 20 years, Cape Town)
	The treatment is bad sometimes. This is because we are sex workers. (Female, 35 years, Rustenburg)
	I visit a hospital because I was feeling ill. That time I was having bronchitis and they say I am smoking and drinking a lot. But I don't do those things. (Female, 30 years, Hillbrow)
	They treated me very badly because they said I am a sex worker so I deserve that. I had a vaginal discharge. (Female, 30 years, Cape Town)
Low self-worth and esteem (Internalized stigma)	I went to Yeoville Clinic after falling on fire because I was drunk and burned my hand. I went when I was still drunk and smelling of alcohol but they didn't insult me. (Female, 27 years, Hillbrow)
	I was afraid to go the clinic at first because I was thinking that the nurse won't treat me okay because I am a sex worker but now every week I'm going for a check to see my doctor for an appointment. And they treat me nicely. (Female, 27 years, Hillbrow)
III. Health Care Service	
Privacy and confidentiality from health care providers	I visited a traditional healer because I was having a rash on my private parts. He was good. I didn't go to the clinic because there is no confidentiality. (Female, 22 years, Cape Town)
	The nurses are very slow and there is no confidentiality. They laugh at patients. (Female, 40 years, Cape Town)

Category	Participant Responses
	I go to the clinic if I see something not right with me like a discharge or sore when I pee. They give me any treatment I need and I go home. No asking me my life. (Female, 24 years, Cape Town)
Refusal of health services	I visited a hospital because I wanted to make an abortion. They refuse to help me because I didn't use a condom. (Female, 36 years, Hillbrow)
	I went to a general clinic but my heart was very painful because I was having toothache together with headache, and the nurses say they take only patients who have an appointment letter. So we went back home. (Female, 30 years, Hillbrow)
Long waiting times and lack of cleanliness	Woodstock Hospital is very bad and I think you must do something about that. I went there at 08:00 only to be treated at 15:20. (Female, 33 years, Cape Town)
	The clinic was not clean and the queue was long. (Female, 36 years, Rustenburg)
Positive attitudes – friendly and kind nurses	I went to Esselen Clinic because of my discharge. The nurse said I have an infection. She gave me medication. The nurse was so friendly and kindly. (Female, 29 years, Hillbrow)
	The doctor treat me so nicely. I was diagnosed HIV positive and he comfort me. He said it is not the end of life. (Female, 36 years, Hillbrow)
	I was stabbed by some skollies[18]. They saw me come from the client. I explained to the nurse what happened because it was the middle of the night, but they did not have attitude: they treat me nice and were interested to know about our difficulties and they blamed the skollies. They was on my side. I see the support from them. (Female, 27 years, Cape Town)
	I went to the clinic and got good service. I have no problem since I came here in South Africa (Female, 20 years, Cape Town)
	I went to the clinic last month. I was menstruating non-stop. The nurse gave me some tablets. They said I had hormone imbalance. I need to eat plenty of fruits and vegetables. The nurses were friendly to me and I was so impressed. I have never heard about hormone imbalance but they had explained it to me and from then I have tried to take care of my diet. (Female, 36 years, Hillbrow)
Negative attitudes –rude and judgmental nurses	The nurse in Paarl shouted at me saying I am a whore, I am killing men and innocent people, and I don't deserve medication in front of people. I must die because I am HIV positive. (Female, 26 years, Cape Town)
	The nurses shout at us. Please help us because of the government nurses. (Female, 33 years, Rustenburg)
	I went to the clinic last month. I was coughing and had night sweats. The

[18] Slang, meaning rogues.

Category	Participant Responses
	nurse said to me that I must test for HIV. I didn't like the way that she handled me. She was shouting at me throwing words like stones as if I am her last born child. I did not test because I was not ready. I just asked for medication. (Female, 42 years, Hillbrow)
	The service was not right at the clinic because when I told the nurse that the condom burst when I was doing business (sex work), the nurse call me a name. She said she not a nurse for sex workers, she is a nurse for the community. (Female, 20 years, Rustenburg)
	I went to the hospital because I had sores on my private parts. The nurse who was serving me was very rude, saying that we sleep with too many men. She was even disgusted to examine me saying that I smell. (Female, 25 years, Rustenburg)
	I am scared to go there because the treated my friend badly. They didn't even give her ARV treatment. Look, now she is dead because they didn't want to give her the treatment early. (Female, 34 years, Hillbrow)
IV. Human and Political Rights	
Abuse by authorities – police and health providers	I was at Kwamayemaye. I was there for muti to attract clients. The traditional healer gave me some stuff to cleanse myself with and to push the other one inside my vagina with his penis. And I let him without a condom. I had no choice. (Female, 21 years, Hillbrow)
	I went to the hospital with broken legs after the police threw me under a moving vehicle. I was afraid to tell the nurses what happened to me. They spoke to me nicely because they thought I fell while running along the road. (Female, 22 years, Sandton)
Advocacy by peer educators	When the mobile van visits in the place, the nurses are very friendly. They also speak to the police when they want to arrest us for attending the clinic. (Female, 38 years, Hillbrow)
	The peer educators are so special. They are so good to us. When the van of SWEAT is there, the police don't arrest us. (Female, 41 years, Cape Town)
	I met the peer educator to tell the story about the police. They said I must go to the meeting, the creative space, at SWEAT to meet other sex workers and to learn about my rights. I learned a lot that day about my rights. I didn't know nothing about my rights. From that day I know what to do. (Female, 29 years, Cape Town)
Injuries and interpersonal violence	Yes I visited the hospital because I was stabbed by a client when I was doing a job and ran away. The counselors were friendly. (Female, 32 years, Hillbrow)
	A client pushed me from the car when the car was moving. Then I go injured. The security guy – he saw me in the road. He took me to hospital. (Female, 22 years, Sandton)
	I was injured. I was fighting in the club. The people I was fighting beat me with a bottle. (Female, 28 years, Sandton)

Category	Participant Responses
	My boyfriend beat me. Then my boyfriend took me to the hospital. Then the doctor asked me why I did not open a case for him. That doctor, she was so kind to me. (Female, 26 years, Hillbrow)
	I went to see a counselor because I was raped and I know the person. He is my regular client and I cannot report him: he said it was a mistake. It is affecting me so much. (Female, 25 years, Cape Town)
V. Preference for Type of Health Care Service	
Peers – emotional, legal, and educational support	The counselor convinced me to test for HIV. I thank her. She knows her job because I'm a difficult person but she changed my mind when she told me advantages and disadvantages of knowing. I am HIV positive and now I know to take care of myself and I am on medication. (Female, 25 years, Hillbrow)
	They were very friendly and good to me. Peers teach me a lot and they give me free counseling because I was raped and I am HIV positive for eight years. (Female, 23 years, Hillbrow)
	Each and every week peer educators are coming to educate us about health issues. They help us a lot because sex workers are not hiding anything to them and they know our life style. (Female, 27 years, Hillbrow)
	The last time I was in the hospital the peer educators came and visited me. They came from SWEAT and they brought me a bag of nice fruit and biscuits and juice. (Female, 29 years, Cape Town)
	The peer educators one day take me to the clinic. I was very sick. They say I must go to SWEAT the following day. They will help me, and they did help. Thanks. (Female, 21 years, Cape Town)
	I had a problem with my friend and she was drunk and she swore at me in public about my work [even though] we work in the same sex work. But that peer educator. She solved the problem. We're fine now. (Female, 28 years, Cape Town)
Private care – good treatment	I have a private doctor and I am on medical aid so I get good treatment for them to keep as their client. (Female, 23 years, Cape Town)
	When I am sick my boyfriend takes me to the doctor because the clinic takes a lot of time, and we have no problem with money. (Female, 25 years, Cape Town)
Sex worker clinic – "respect us as human beings"	There is some people who understand what we are going through so they treat us well, especially at Esselen. Everyone is nice for us. (Female, 40 years, Hillbrow)
	I went to Esselen clinic to fetch some condoms because the other clinics they don't want to give you condoms especially when you are a sex worker. I prefer to go to sex workers' clinic because they respect us as human beings not a selling-thing people. The nurse, peers, and even the counselors are very good to us. They care about us. (Female, 29 years, Hillbrow)
	I went for my CD4 count and pap smear at Esselen Clinic. The staff is always great there because they know that they are dealing with ladies of the night

Category	Participant Responses
	unlike other clinics where you don't feel free. (Female, 30 years, Sandton)
Sex worker clinic – fear of occupational exposure	I went to the clinic because I was sick and I tell my boyfriend to come with and he said no because other sex workers are going to see him there at the clinic. (Female, 38 years, Hillbrow)
	Because my friend told me that if you go to Esselen Clinic you will regret it. Because everyone knows that it is a clinic for sex workers only. So I'm scared to go there. (Female, 30 years, Hillbrow)
Traditional healers improve business and treat one nicely	I was going to a traditional healer because my business was very slow. So I was going to take a charm so that my business it can be very fast. And he treat me very special. (Female, 35 years, Hillbrow)
	I visited a traditional healer. I had an STI. It is better to go to a traditional healer because they are friendly and they treat me nicely. In the hospital if you are a prostitute the nurses are rude. (Female, 26 years, Cape Town)
	I always go to the traditional healer to get medicine for luck. Too much competition in this business so I want to make money. I always wash my body with the medicine I get from the traditional healer. (Female, 20 years, Sandton)
VI. Needs	
Regular checkups because I am a sex worker (Normative need)	I always visit the clinic for my health and checkups because of my work which is risky. Sometimes the condoms burst so I run to the nearest clinic for checkup (Female, 39 years, Cape Town)
Never uses health services (Felt need)	I am a very strong woman. I'll never get sick. (Female, 22 years, Hillbrow)
	I haven't gone anywhere regard illness. I am not sick. I am healthy. (Female, 28 years, Hillbrow)
I have HIV and always go to the clinic (Expressed Need)	I always go to the clinic cause I'm HIV positive, and I always do checkups almost every month. (Female, 41 years, Hillbrow)
Treated just like anyone else (Comparative need)	I went to hospital for TB treatment. The nurses treated me just like anyone else. (Female, 25 years, Cape Town)

3.6 Summary

Nearly a third of the study sample (n=2,023) were between the ages of 26 and 30 years, and less than 10% reported having no education at all. The data showed significant internal and external migration patterns, with FSWs migrating most frequently from Eastern Cape within South Africa and Zimbabwe from outside of South Africa. Just more than one in six FSWs had and was living with a

permanent partner, but most had child or adult dependents. Nearly all FSWs (96.93%) claimed to use condoms consistently, and a quarter reported that they never drank alcohol. More than half of the participants (n=1,909) had used health services in the month preceding the study with more than half opting for public health facilities. The primary motivation for using health care was for HIV, STIs and TB, with the least cited reason being counseling and advice. More than 80% of the participants were satisfied with the health services.

Pearson's chi-squared tests and logistic regression modeling showed that younger FSWs (25-30 years) were more likely to use health services, especially public health facilities or NGOs, while FSWs older than 30 years were significantly less likely to use health services. FSWs with some education were more likely to be satisfied with health services.

Town of residence and province of birth were also associated with the use of health services. Women from Rustenburg and the North West province were less likely to use health services, and in addition, those who did, were statistically less likely to be satisfied with the services they received. Capetonian and Hillbrow-based FSWs were significantly more likely to use NGOs and outreach services.

Having a partner and adult dependents were positively associated with health services utilization. The results of a logistic regression model show that FSWS with adult dependents were between one-and-a-half to twice as likely to use health services as those without dependents.

Establishment-based FSWs were more likely to use a wide range of health services (i.e., HIV, STI, TB, reproductive health and other services) and to be satisfied with these services. Higher earners (more than R400 (US$ 42.56) per client) were more likely to consult the services of traditional healers and private practitioners, while FSWs who earned less than R100 per client opted for NGOs and other outreach services. FSWs living in Rustenburg were also more likely to consult traditional healers, and least likely to visit NGOs or outreach services.

Several factors were associated with reason for using health services. Women living in the Western Cape were more likely to use HIV, STI, TB and counseling and advice services. Having more than 30 clients in the past week, earning less than R100 per client, entering sex work before 20 years, having more than three adult dependents, and living in Hillbrow were all positively associated with using reproductive health services. Counseling and advice were used by women living in the Western

Cape and in Cape Town and by women who worked on the streets, and earned more than R400 (US$42.56) per client.

Women who were regular drinkers had 46% lower odds of using health services, and were significantly less likely to be satisfied with the services they received.

Qualitative data largely confirmed the findings of the quantitative results, and highlighted additional factors influencing utilization and satisfaction with health services. Factors included alcohol use and abuse, discrimination and stigmatization, quality of health services and attitudes of health workers. Important emerging themes included discrimination and self-stigmatization, as well as the importance of confidentiality and privacy. Occupational stigma emerged as a new theme, with an overwhelming proportion of FSWs who reported refusal of service or bad treatment living in Rustenburg. Other themes included preference for type of health service, as well as human and political rights and needs.

Chapter Four: Discussion

The overall aim of this study was to examine factors that influenced FSWs' utilization of and satisfaction with health services in four settings in South Africa for the period April to August 2010. This section discusses the findings relating to health care utilization, satisfaction, selection of and motivation for visiting health services that were presented in Chapter 3.

The results are considered in the light of relevant literature, and discussed within the framework of the Gelberg-Andersen Behavioral Model for Vulnerable Populations. The results of Chapter 3 show that predisposing factors included age, education, provincial birthplace, family characteristics, and alcohol use. Enabling factors included logistical and psychosocial factors such as town of residence, sex work characteristics, and type of health service. Qualitative data indicated that health worker attitudes, and stigma were additional predisposing factors.

Although need was not specifically measured, normative, felt (perceived), expressed, and comparative needs emerged from the qualitative thematic analysis. These predisposing, enabling and need factors are presented in Figure 2.

Several limitations of the study are presented at the conclusion of this chapter.

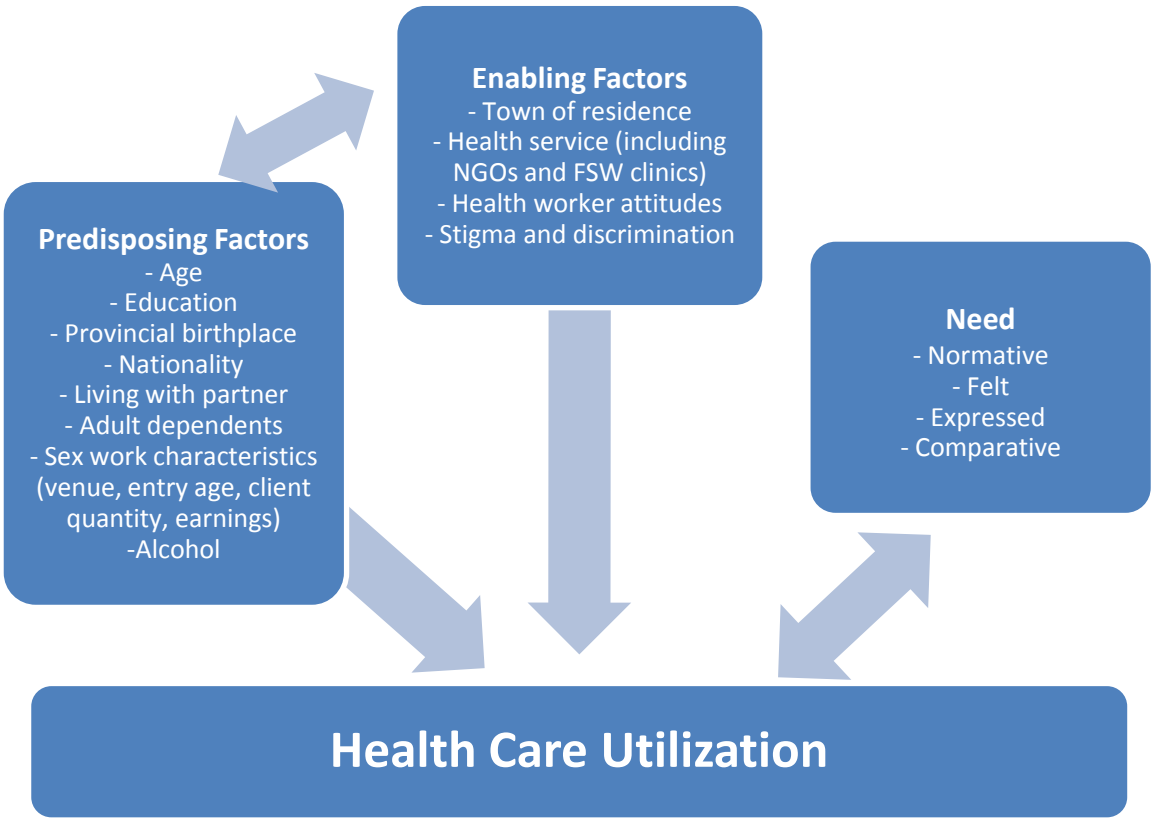

Figure 2. Predisposing, Enabling and Need Factors associated with FSWs' Utilization and Satisfaction with Health Services

Just less than 60% of the study sample used health services in the month preceding the survey: this is more than double for South African women in general (72). The South African Demographic and Health Survey, 2003 reports that only 24% of all women consulted health services in the 30 days preceding that survey; health services in this survey did not include NGOs, but did include categories for public, private, chemists, dentists and faith- and traditional healers (72). The majority of participants in this study (80.31%) reported being satisfied with health services. This high utilization of health services may be driven by the multiple physical needs of FSWs and the demanding and physical nature of their work. The high satisfaction rates may reflect the strong impact of the NGOs and outreach organizations that are more likely to have provided highly focused and targeted services to two of the four study sites.

4.1 Utilization and Satisfaction with Health Services

Utilization of and satisfaction with health services were both associated with the predisposing factors of having adult dependents and alcohol use and abuse. Additional predisposing factors associated with utilization included age, provincial birthplace, and having a partner, while education was a predisposing factor associated with satisfaction with health services. Enabling factors common to both utilization and satisfaction included town of residence, and sex work venue; while utilization was also affected by the number of clients per week and earnings.

Nearly a third of the FSWs in this sample (n=1,909) were between the ages of 25 to 30 years, consistent with other research (5). Most reported starting sex work before the age of 30 years. The logistic regression model indicated that women older than 30 years were less likely to use health services. This is in contrast to a Nepalese study that showed that women older than 25 years were more likely to use reproductive health services (40); but a Tanzanian study found that being between 22 and 25 years -- like this study -- was a significant positive predictor for FSWs seeking treatment for STIs (41). Qualitative data also provided some evidence that age may either work for or against the FSW, with some being treated badly or better because of being more mature, while others were castigated for engaging in sex work at a young age. It appears that age may be ensconced in specific societal or cultural contexts, and perhaps older women in this study in South Africa were more conscious of societal norms and values, making them more fearful of being exposed as FSWs by health providers.

Most FSWs had some education, with less than 10% reporting having no education at all. In contrast, Scorgie et al. (5) found that up to a third of FSWs in some African countries were uneducated. Education was a predisposing factor that was positively associated with satisfaction with health services, with logistic regression modeling showing that women with no education were more likely to be dissatisfied with health services. Research shows that women of low socio-economic status and with lower education levels have difficulty in accessing health services (33), which may be accompanied by low self-esteem and lack of agency. This, in turn, could result in decreased levels of satisfaction, and even prevent full participation in health interventions or community mobilization programs because of illiteracy and reduced ability to read and access information (73).

City of residence influenced health services utilization and satisfaction with health services, and provincial birthplace was associated with health services use; all three variables were significantly

associated through logistic regression modeling. Women who were living in sites with a strong NGO presence (i.e., Cape Town and Hillbrow) were much more likely to use health services and to be satisfied with these services. Rustenburg-based women, in stark contrast, were less likely to use health services, and when they did, they were less likely to be satisfied with these services. The presence of NGOs and advocacy groups supporting SWs is a likely reason for this finding. Hillbrow is the only area in South Africa with a clinic that targets SWs (74, 75), while SWEAT conducts an active advocacy and outreach program in Cape Town (32). It is also probable that conservative attitudes typical of a rural and mining area would support negative health provider attitudes, making FSWs less likely to find health services acceptable and accessible. The qualitative findings also provided evidence that FSWs in Rustenburg were more likely to be at the receiving end of negative health providers.

Many studies indicate that FSWs often do not have permanent partners (5, 60), mirroring the findings of this study. Despite few live-in and permanent partners, most participants reported having at least one adult dependent. FSWs with permanent partners and especially those with adult dependents -- as shown through the logistic regression analysis -- were significantly more likely to use health services. The predisposing factor of having more than three adult dependents was also associated with increased satisfaction with health services. Research in India showed that many FSWs were the sole breadwinners in their families (60) and a Pretoria-based study on FSWs indicated that nearly three-quarters of the participants were financially supporting at least one adult at the time of the study (33). It may be that FSWs who live alone are socially isolated and excluded from the broader community, and consequently may suffer from lack of self-esteem and agency to use health services effectively (53). Those with permanent partners or adult dependents would be less isolated, surrounded by people who may share knowledge and information on how to access health services and may bolster more confidence in using and negotiating health services. Being the sole breadwinner also places a sense of responsibility on the individual and may improve agency in negotiating health services. There was no significant association between having child dependents and health services utilization. This may be due to a South African practice of allowing grandparents to rear children, but warrants further research.

Women working from establishments were not only more likely to use health services, but they were also more likely than street-based workers to be satisfied with the services. Blankenship et al. (42) observe that FSWs' workplace is an enabling factor that influences access to health care. For example, those based in hotels or brothels would be more visible and accessible to outreach

services. Once again, this may point to the positive influence of the NGOs in two of the four sites in this study. In addition, street-based FSWs are a highly marginalized and often stigmatized population, which would lead to less access to and less uptake of health services (particularly supportive and prevention services) for fear of moral judgment (76). Women working from "other" venues like their homes may be particularly hard to reach, highlighting a hidden but largely neglected segment of the FSW population in South Africa.

Unsurprisingly, the logistic regression model indicates that women who had more than 10 clients in the week prior to the survey were significantly more likely to use health services. Although the researcher was unable to find supporting literature, it is assumed that perceived risk may be higher among FSWs who have more sexual partners, they may have more disposable income, and it may also be possible that they are more affected by STIs or HIV. This would lead to increased perceived need and use of health services.

A systematic review on FSWs shows that higher earners work in escort agencies, with hotel-based FSWs earning less, and street workers earning the least amount of money (5). Although this study did not examine associations between earnings and venue, it is presumed, based on the literature, that higher earners in this study were establishment-based. They would therefore be more likely to be in contact with NGOs, which would not only improve access to health services, but also improve confidence and negotiation skills. The improved ability to negotiate prices and safer sex with clients (77) may also lead to more assertiveness and better negotiation with health providers.

A quarter of FSWs in this study reported never drinking alcohol, while nearly a fifth reported high alcohol use. In contrast, approximately 30% of South African women have consumed alcohol in the past year and roughly a third drink at high-risk levels over weekends (26). Furthermore, a South African study investigating alcohol and substance abuse among women found that FSWs had a significantly higher prevalence of past-year alcohol or substance use than non-FSWs (26).

Consistent with the results of several studies, logistic regression models in this study showed that FSWs who used alcohol were significantly less likely to use and were more likely to be dissatisfied with health services (5, 22, 33, 78), making alcohol use a major predisposing factor that negatively affects access to health services. A Pretoria-based study provided evidence that there is a strong need for alcohol and substance treatment programs for FSWs, but that women do not know where to go or how to access these services. In addition, only a third of the existing programs provided women-focused and gender-sensitive treatment (26). Researchers also indicate that substance and

frequent alcohol users may be less aware of poor health symptoms, which could lead to delayed use of or total avoidance of health services (33, 40)

Nearly all FSWs (96.9%) in the study sample reported consistent condom use, but this factor was not significantly associated with any of the outcome variables. Scorgie et al. (5), however, point out that condom use is often subject to reporting bias, with one study showing that nearly a third of Madagascan FSWs who reported having protected sex had detectable prostate-specific antigens, a biomarker of semen on vaginal swabs. The high reports of condom use may also be due to peer educators' influence in educating FSWs on condom use or education, and making condom use an acceptable norm (5, 79).

4.2 Type of Health Service Used

Selection of health service was associated with the predisposing factor of age, and enabling factors of town of residence and earnings. Most FSWs opted for the free public health services, with NGOs the second most common service, and only a few women used private practitioners or traditional healers. The concept of dedicated SW clinics arose from the women's narratives.

Age was a predisposing factor associated with type of health service. The majority of the women in this study, aged 26-30 years, used the health services of NGOs or public facilities. This finding may be related to the affordability and accessibility of these services in contrast to the services of private practitioners or traditional healers.

The strong presence of NGOs and SW clinics in Cape Town and Hillbrow may account for the high use of health services. The high use of NGOs may be due to mobile outreach services that actually took health services to the target population rather than passively waiting for health visits. Rustenburg-based FSWs were least likely to use NGO services, and an overwhelming proportion of women from this town reported denial of service or reported having received bad services. There are no organizations advocating for and supporting the health needs of FSWs in Rustenburg, and coupled with the more conservative nature of the citizens, this may have led to judgmental attitudes and poor quality of service. Barriers to effective health use included long waiting times, cleanliness, and negative staff attitudes. Several participants specifically complained about lack of confidentiality.

The results of this study show that stigmatization of sex work and the resultant social marginalization are serious issues. They are serious barriers to accessing health services,

simultaneously causing and exacerbating FSWs' physical and mental vulnerabilities (5). The narratives of several FSWs indicate that they felt they were treated badly or denied access to public health services because of their occupation and more than one reported opting for "far-away clinics" to avoid being exposed as a SW by the health providers, an avoidance technique that is mirrored in a study based in India (40). Several other South African studies also show that stigma and negative attitudes of clinic staff make FSWs uncomfortable in accessing health facilities (80). There is a substantial need for improvement of public health services and sensitization training for the health workers in public facilities.

Narratives from FSWs also showed that the peer educators associated with NGOs were highly valued for their support -- often going beyond the role of simply providing free condoms and limited information on HIV. Sarafian (81) has defined different types of peer support, and it appears that these peers provided many types including: (a) informational, appraisal (e.g., you should not have sex without a condom); (b) instrumental (e.g., provision of condoms); (c) legal and human rights; (d) emotional and companionship support; and (e) even interpersonal intervention to solve problems.

Significantly, FSWs from Rustenburg and Sandton were more likely to use the services of traditional healers. The need for privacy and confidentiality emerged as a powerful need in the narratives of FSWs in this study and in another in Nepal (40). FSWs stated that these rights are guaranteed with the services of traditional healers, making this preferable to the unfriendly public health facilities or non-existent NGOs for Rustenburg FSWs.

Although many FSWs workers used the free and readily available public services, the higher earners (more than R400 (US$ 42.56) per client) were significantly more likely to opt for the services of traditional healers and private services. Private practitioners were perceived as providing *"good treatment"* but reserved for *"those who do not have problems with money"*. A Bengali study on the choice of health provider showed that the participants' perceptions of higher quality of treatment may often override costs in relation to provider preferences, particularly among traditional people (82). Other studies also found that FSWs considered private health care as more available, accessible and acceptable, and women were often prepared to pay more for private treatment rather than opt for free – and what they considered – inferior treatment (40, 60).

Dedicated SW clinics emerged as a perceived alternative source of health care, albeit with mixed feelings. Some feared occupational exposure as FSWs, while others recognized that these services could provide targeted and non-judgmental health services. In South Africa, the Wits Reproductive

Health and HIV Institute (formerly known as the Reproductive Health and HIV Research Unit) launched a comprehensive range of services at the Esselen Clinic in Hillbrow, an inner city suburb of Johannesburg. The services included successful, comprehensive interventions catering to SWs. Esselen Clinic is conveniently located at the heart of Hillbrow, providing a mobile clinic, as well as outreach and peer education activities in which FSWs actively participate. The high usage of this clinic suggests that there is a strong need for high quality, accessible, and appropriate health services targeted to the needs of FSWs (62, 75).

Other SW clinics have had mixed successes. A study on community mobilization in Brazil that included a FSW clinic provided evidence that internalized stigma and socio-economic pressures may have limited the participation of all the women, thus reducing the impact of the intervention (83). The Rajahmundry project in India also had a dedicated FSW clinic that experienced double-edged consequences. Some FSWs shied away and distanced themselves from the project, while others openly challenged community disapproval and became outspoken advocates for the rights of FSWs (84). On the other hand, an all-night clinic in Mozambique along the Tete traffic corridor linking Malawi and Zimbabwe was extremely well received by the FSWs and their clients. Both parties used the clinic extensively, and asked for more services, with the only challenge being one of long-term funding and sustainability (85).

4.3 Reasons for Health Services Utilization

Reasons for using health services were associated with the predisposing factors of provincial birthplace and having adult dependents, and the enabling factors of town, type of sex work, entry age, number of clients and earnings.

With the high HIV and STI prevalence and HIV/TB co-infection rates, as well as the large and well-publicized awareness campaigns in South Africa, it is not surprising that HIV, STIs and TB were the most common reasons for contact with health services. Dunkle et al. state that typically half to two-thirds of FSWs have a curable STI at any one time (16), and approximately 37% of sub-Saharan FSWs live with HIV (45). Reproductive health was the second most common reason for using health services, and once again this is unsurprising because of the reproductive age group of the women and the strenuous physical nature of their occupation (7).

Less than 10% of FSWs used counseling and advice, which could include mental health services or alcohol and substance rehabilitation treatment programs. This may have been due to lack of

awareness or knowledge of how to use services (50), or an inability to recognize the need for such services, or it may simply be attributed to the lack of availability of such services (26). Significantly, FSWs living in Rustenburg were less likely to report any reason for visiting health services, while Hillbrow-based FSWs were more likely to use health services for all the stated reasons.

Having adult dependents and being establishment-based were factors associated with increased likelihood of using health services for the range of reasons, with the exception of counseling and advice. Having more clients was also positively associated with using reproductive health care. Contrary to the findings of a systemic review that indicated that FSWs in southern Africa had on average 34 clients per week (5), this study found that FSWs had approximately 15 clients per week, and those with more than 30 clients a week were significantly more likely to use reproductive health services, probably due to the frequency of sexual acts and multiple partners which could affect the perceived risk of FSWs.

Finally, women who embarked on sex work before the age of 20 years were more likely to use reproductive health services; this may be due to stress imposed on the immature physical body exposed to multiple and frequent sexual encounters that lead to trauma and reproductive health problems (86).

4.4 Health Needs

The perception of non-need for health services is an integral part of the “felt” or “perceived” need as described by Bradshaw (37). This concept emerged from the narratives when several participants felt that they never used health services because they were strong, never got sick, or felt that they did not need health services. Denial of illness or need for health services is surprising among women in an occupation that places has high physical and mental demands on their health, particularly among those of a reproductive age. A study of Nepalese FSWs found that 25% of the study sample had never visited health facilities for the treatment of STIs, and 6% did not use health services thinking that they did not require treatment for STIs (40). In the same vein, FSWs in India reported only seeking health services when they were unable to perform daily tasks or for incapacitating symptoms such as pain and fever, waiting for some time before consulting health services with more ambiguous symptoms such as menstrual disorders (60).

According to Andersen’s framework, health service utilization is associated with an individual’s needs, and in this instance, with the individual’s perception of health needs which are frequently

limited to the physical body or the absence of disease (60). Despite the high rate of health services utilization in South Africa, the findings of this study suggest a need for improved health education and an awareness of routine health check-ups.

In contrast, "expressed" need emerged as a theme when several FSWs reported consulting health services to keep their bodies healthy, perceiving this as a means to economic survival and recognizing their risky behavior. Once again, the high rate of health services utilization may be attributed to the presence and outreach by NGOs and peer educators. A recent study among FSWs in Laos showed that the women perceived their physical health to be intertwined with economic well-being, recognizing the need for a healthy body to do sex work and to sustain a stable income (87). This recognition may be a result of FSWs' contact with the NGOs and outreach services that provided adequate health education and support.

Finally, there was an element of comparative need, with several FSWs claiming to be treated "*like anyone else*", while others perceived discriminatory treatment because of their migratory status. Approximately half of the study sample was from other African countries, notably from Zimbabwe, and internally, there was significant migration from provinces to the study sites, mostly from the Eastern Cape. Richter et al. (74) note that the Eastern Cape is one of South Africa's poorest provinces, with high rates of outmigration in search of employment. The high migration from Zimbabwe may also be due to economic need. Thus, as the literature suggests, migrant status -- particularly illegal migrants -- may be a significant barrier to using and being satisfied with health services. Migrant FSWs experience more health problems and inequities in accessing health service because of being foreign (5, 74, 88), and often this is due to health provider or community attitudes, which calls for the need for social inclusion and community mobilization to minimize the effects of prejudice.

4.5 Limitations

In considering the findings of this study it is important to bear in mind the following limitations. This study used secondary data, and the primary study was not designed to answer the research question on health care utilization. Several other factors that are not explored in this study may affect FSWs' use of and satisfaction with health services. In addition, the primary study's operational definition of "health services" was extremely broad and included hospitals, clinics, doctors, nurses, traditional healers, peer educators, and counselors.

Three of the four outcome variables (i.e., satisfaction, health reason, and type of health service) were post-coded from one open-ended question. The researcher analyzed and coded the answers to this open-ended question and there may be bias or misinterpretation in the researcher's coding. Answers to the one open-ended question were often broad, resulting in a lot of missing data and reducing the number of responses. The reasons for using health services were also categorized in broad themes to ensure more robust results, which may have limited examination of unique reasons for consulting health care.

The researcher of this study did not participate in the primary study's data collection and has little understanding of the process and the challenges that may have arisen. There is limited information on the type and quality of training received by the field workers and supervisors, which may have affected the quality of data. A preliminary examination of the primary dataset, for example, showed that 41 questionnaires failed to specify gender. In addition, missing or inaccurate data collection may be due to the setting (i.e., field workers collected data in "hot-spots" on the streets, and participants may have been distracted by external influences, such as potential clients, or noise that often accompanies sex work (e.g., music in bars and shebeens)).

Because of the clandestine nature of the FSWs' profession, random sampling is neither feasible nor ethical. A systematic non-probability sample of FSWs was used instead. A comprehensive picture of FSWs may have been limited as the sites were specifically selected by organizations actively involved with SWs, which may unintentionally have recruited FSWs who had been exposed to organizations, and may have omitted the hard-to-reach segments such as street workers and women who work from home. External validity may be compromised and findings therefore may not be generalizable to all FSWs in South Africa.

The primary study may have been limited by measurement error. The items included in the questionnaire were developed specifically for this study and were not validated measures e.g. alcohol use and abuse was not measured using a standardized scale such as the AUDIT (89)or CAGE (90). In addition, the questions relating to alcohol consumption were broad and the results may be related to binge drinking. However, the under-reporting may not affect health care utilization, and so the associations between alcohol and the outcome variables are most likely biased towards the null hypothesis.

The research assistants who collected data were peers from SW outreach organizations, which could have resulted in additional bias while collecting the data. While this is a good way to approach a

hard-to-reach population, the inexperience of data collectors may have resulted in failure to administer the sampling procedure and questionnaire in a standardized manner. Peers may also have elicited a social desirability bias among participants. Findings are based on self-reports by SWs and this may have response bias or other inaccuracies, particularly with regard to sensitive or personal issues. Contrary to expectations, and to the high HIV and STI prevalence among FSWs, nearly all (96.93%) of the sample reported consistent condom use. It is likely that condom use is over-reported since the research assistants were peer educators. This may be due to social desirability bias or measurement bias due to the way the questions on condom use were framed.

Chapter Five: Conclusions and Recommendations

Overall, the findings in this study show associations between age; education; provincial birthplace and town of residence; partners and adult dependents; workplace, earnings, and number of clients; and alcohol use, and the outcome variables of health care utilization, satisfaction, selection of health service, and reason for using health services. In addition, thematic analysis of FSWs' narratives reveals the importance of quality of health services and the effects of discrimination and stigma on health service utilization.

The study found that overall most FSWs had used health services and were satisfied with these services. However, closer examination of the results highlights that this was not the case in the more rural study site, where an NGO presence was absent. The qualitative analysis found that even in Cape Town where satisfaction was high overall there were cases of human rights violations where health services were denied or where FSWs were discriminated against. Social exclusion was another barrier to using and being satisfied with health services, as shown by the significant associations with adult dependents. Although alcohol use may be under-reported, it still emerged as a negative factor, highlighting the high risk behaviors intricately linked with sex work, and pointing to a need for rehabilitation services. Finally, although a dedicated SW clinic may have elicited some hesitancy, the strong appreciation for the peer educator and advocacy services shows that there may be room for targeted services.

The Gelberg-Andersen Behavioral Model for Vulnerable Populations was useful in framing health services utilization and satisfaction among FSWs. Although many significant variables, (e.g., adult dependents) could as easily have been both enabling and predisposing factors, on the whole it was a useful framework in conceptualizing the multiple variables that were associated with health services utilization and satisfaction. The needs section was expanded, however, to include the various needs emerging from this data.

Access to affordable, accessible and user-friendly health services is a fundamental human right, and this often falls short for the FSW because of unmet and unrecognized factors influencing utilization. A multi-faceted approach working on various levels will contribute to improved health services and access to these. A basic package of services should address the physical, emotional and mental well-being of FSWs, while peer education and community mobilization should contribute to the improvement of self-esteem and negotiation skills. Advocacy and community mobilization could

provide a safer working environment for the SW community, and may affect social norms and perceptions of the industry, reducing stigmatization and marginalization. Structural changes like decriminalization and improvement of health services should lead to increased protection and improved health of FSWs.

5.1 Recommendations

Many current FSW interventions focus on screening for and preventing HIV and STI infections, often *"… reducing SWs to potential vectors of infection of their clients and families and ignoring them as people with other health care needs"* (8 p.118). The findings of this research suggest the need for a basic package of services, expansion of health services, particularly to the hidden FSW communities and geographically remote areas, establishing and sustaining interventions such as SW-targeted clinics, support groups through peer educators, and FSW-led mobilization and decriminalization of sex work to ensure increased protection and access to non-discriminatory health services (19). It is also important to increase FSW's collective and individual efficacy to negotiate better health services, and safer sex from clients particularly within the unique social and cultural context of the FSW environment in South Africa. Finally, other structural interventions include decriminalization and economic empowerment.

5.1.1 Basic Package of Services

Although the standard package of condom provision and HIV and STI testing does exist in some parts of South Africa, this should be strengthened and expanded to hard-to-reach areas and populations. Several South African NGOs have peer-educator programs, which have the potential to, like the Sonagachi Project, prevent HIV and STI infection among FSWs and their clients by expanding access to male and female condoms and lubrication, provide HIV and STI counseling and testing, and accompany these with peer education (83). In addition, WHO recommends providing ready access to HIV treatment and care for FSWs who are already infected with HIV and STIs, with health providers or peers ensuring that SWs who receive care and treatment are given information on consistent condom use, family planning and contraception at each encounter (7).

There is also an urgent need to move beyond the standard interventions for FSWs that focus on providing HIV information, supplies of condoms and HIV/STI screening to a broader and more integrated package of services (8, 24) including other physical, emotional and mental health support services.

Comprehensive Health Needs

The findings of this study suggest that HIV/STIs/TB and reproductive health services are well used in comparison to using counseling and advice. In addition, the negative influence of alcohol use on health utilization, and the evidence that several FSWs had unmet or unrecognized health needs point to the need for comprehensive health services. Evans and Lambert (60) note that FSWs frequently do not recognize their health symptoms and the range of services that are or could be provided by health facilities. This makes the need for comprehensive health education and awareness programs through contact with health services as well as through peer educator programs critical. Several studies recommend that a comprehensive health package include mental health counseling, health and sexual education, alcohol rehabilitation services, and personal empowerment and skills development (8, 23, 26). Since many reproductive tract infections are caused by inappropriate use of lubricants or other harmful practices, Chacham et al. (8) recommend education on sexuality, personal hygiene, and STI prevention.

Meeting the health needs of FSWs depends on promotion of their human rights, access to health care without discrimination and attention to social factors like alcohol and violence from clients, partners and the authorities (8). High risk behaviors like excessive alcohol consumption can lead to lower self-esteem, depression and other mental health problems, as well as make FSWs more vulnerable to violence. There is a definite need for alcohol reduction and drug rehabilitation programs (22).

Inclusive Health Programs

Although clients of FSWs are often targeted by health programs, partners and adult dependents rarely receive this attention, but an intervention with male partners in the Dominican Republic showed that involving male partners could create strong social networks that led to improved condom use (91). Finally, there is a strong need to reach out to the more hidden FSW populations -- the older and single women -- through awareness and community mobilization campaigns to counter internal and societal stigma. The findings of this study suggest that older, single women are not being reached by health services. While it is important to target partners and other family members in interventions, one should also focus on reaching out to single women. Outreach and (unmarked) mobile services are imperative to reach these sections of the population with the discretion necessary to avert occupational exposure (80).

Integrated Programs

Finally, activities should be implemented as a comprehensive package, since those targeting individual-level problems (e.g., condom promotion, or HIV counseling and testing) fail to take the whole person into account and evidence-based projects show that in addition to physical health needs, development of agency or self-esteem among FSWs is an important part of accessing health services (45). The narratives indicating that health services are only for "sick" people or the perception of peer educators as mere suppliers of condoms suggest that FSWs perceive health services as silos and not as a comprehensive health service.

The Brazilian "Get Friendly with Her" campaign is an example of a comprehensive social and behavior change communication project for street and brothel- based FSWs (8). This included sexual health workshops, a guide on how to access public health services, a hotline providing advice and information, and the use of peer educators to reach out to the FSW population. The focus was on a rights-based approach that promoted FSWS' health through education on self-care, FSW-led intervention through peers, as well as combined educational workshops for FSWs and clients to create awareness of the health needs of the women (8).

5.1.2 Health Services

Data from this study suggest that FSWs living in rural or remote towns, and those working on the streets or in venues other than hotels or brothels may be overlooked by current health outreach efforts.

Expansion of Services

It is evident from the data that there is an urgent need to extend the services of NGOs and SW organizations to geographic areas beyond Hillbrow and Cape Town, particularly to rural areas and places where migrant workers congregate. This may prove to be difficult since the extent and location of FSWs in South Africa is largely unknown, but this points to an urgent need for systematic surveillance of SWs in South Africa (5, 6). Surveillance will help to map the SW locations and to determine the number of FSWs, which in turn, will help health services reach out to the hidden FSW populations.

Expansion of services can only be achieved effectively if the South African government fully recognizes the health needs and rights of marginalized populations like SWs (24, 45). Although the NSP does call for improved and widespread HIV/STI and TB testing and screening and referrals in

multiple settings (18) resources are limited and a national coordinated health program for FSWs has yet to be developed.

WHO also recommends ensuring high coverage and utilization of services through large scale implementation, adapted to local cultural and social conditions that would ensure sustainability (1) . However, sustainable interventions not only require political commitment, but also require resources, so there is a need for advocacy organizations to target government and donors, particularly those that explicitly prohibit assistance for SW programs (45).

Peer Educators and Outreach Services

A supportive and enabling environment is important to ensure that all segments of the FSW population are reached. Lack of education was strongly associated with being dissatisfied with health services, and as suggested earlier in this paper, this may be due to lack of understanding or even illiteracy. Peer education programs were strongly recognized as providing helpful and valuable support to FSWs in this study. Peer educators are differentiated from health educators in that the support is broader, but they are also perceived to be non-judgmental and have inner understanding of the SW lifestyle (81). Interventions using peers have also been successfully used to improve self-esteem and empower FSWs to take control of their own health, but also to negotiate condom use and make safer sexual decisions (8, 23), and to raise awareness of health needs, services and programs through interpersonal communication. Face-to-face communication is particularly important among illiterate women (42).

Participatory Programs

In this study FSWs often perceived health providers and others as treating them with disrespect, making peer education programs highly regarded. Research shows that successful health interventions are usually conceptualized and led by FSWs as shown by the highly successful participatory model of the Sonagachi project (65, 83, 84, 92-94). The 100% Condom Use Program (100% CUP) that was implemented in Thailand has been touted as a success story, but the top-down approach of this intervention resulted in several negative outcomes (95). The program aimed to gain the buy-in of owners and pimps to enforce condom use among FSWs, but lack of involvement with FSWs has resulted in complete control in the hands of the owners and managers. This has may lead to bribery and coercion and have serious adverse effects on respect for the human rights and health of FSWs (86). In addition, the top-down model does little to build the skills, particularly sexual negotiation skills of women (95).

The bottom-up and social transformatory model that results in self-empowerment is most closely captured by the spirit and the activities of the Sonagachi. This well-known Indian intervention used peer educators to empower and mobilize the SW community, and today the project is led by FSWs. First implemented in 1992 it is still known as an extremely *"… relevant and credible source of support for sex workers"* (96 p.125). Central to the success of this project is the community participation and collusion with political authorities to ensure projection and the ability to take control among FSWs (55, 97). Sonagachi aimed to facilitate a sense of community, decrease perceived powerlessness and insecurity, increase access and control over material resources, increase social participation, and facilitate social acceptance of FSWs (98) to improve the health of FSWs.

Other models have expanded the Songanachi project. The Indian Rajahmundry also focused on community participation and mobilization, but highlighted community building through the formation of FSW community-based organizations and the creation of an enabling environment through advocacy, organizing public events to challenge FSW stigma, and using media advocacy to encourage positive portrayals of SWs (84). The success of this project rested on the foundation of a community-based organization working closely with social change agents/peer educators to encourage ownership of the project. The organization allowed FSWs to gather publically, present a united front, and to demand better social and health services (84).

There is much debate about community mobilization and empowerment, but the best practice models all urge participatory programs that allow FSWs to make decisions and control their own bodies (9). Top-down programs like the Thai 100% condom use programs should be avoided, and it should be recognized that FSWs are not passive recipients of health services, their lifestyle is often determined by predisposing social determinants and high risk behaviors, so there is a strong need to recognize health needs and to develop agency and decision-making (negotiation) skills (30, 92).

Quality Improvement and Targeted Health Services

UNAIDS and WHO (7, 99) recommend that health services should be accessible, acceptable, affordable, and have high quality standards. The quality of public health services and attitudes of health providers were perceived as barriers to health use. Although the South African Department of Health is committed to improving the quality of health services through the National Core Standards (100) and several NGOs have recommended or are conducting sensitization training for health providers (8, 24, 53, 75), the findings of this study suggest that great improvements are still required. It is suggested that a needs assessment among FSWs be conducted, and then training, with the

active participation of FSWs, be conducted among health providers, particularly those working in public health facilities.

Although some FSWs fear occupational exposure through the use of dedicated SW clinics, many welcome these services, particularly outreach services run by peer educators; depending on the social and cultural context, such clinics may provide an invaluable niche. The services of traditional healers were also preferred by those who could afford them, and although this topic does warrant further research, sensitization training should be extended to traditional healers. Since traditional healers play an important role in health services, they should receive specific training on FSWs' issues, and be made aware of other services within the health system that could assist the FSW. Finally, because of the high proportion of migrant FSWs, it is recommended that health providers be provided sensitization training on the needs of migrants.

5.1.3 Structural Support

Health worker attitudes, and by extension, community discrimination and stigmatization led to low self-esteem and reduced efficacy to use health services effectively. Some structural changes that would minimize societal stigma and improve the social identity and negotiation skills of FSWs include (a) community mobilization; (b) decriminalization or legalization; and (c) micro-enterprise projects.

Community Mobilization

Sonagachi shows that community mobilization can support FSWs to build and lead their own organizations to advocate for and to ensure equitable access to health care (84). Creating an awareness of SWs in the media, and partnerships with authority figures like health providers and police could help to ensure that the rights of FSWs are respected and protected, and in the long run, should help minimize stigmatization and discrimination (65, 84, 101). A collective voice and leadership is important to advocate for and lead change (45). In Africa, the African Sex Worker Alliance and SWEAT, based in South Africa, are good examples of networks that help capacity building, development of social capital, and advocacy for the rights and health services for SWs.

Decriminalization

Criminalization of sex work often leads to abuse of power and human rights by clients, pimps, and authority figures like law enforcement offices (102). It also helps authorities ignore the importance of occupational health and safety regulations for SWs (103). Decriminalization of adult sex work may improve health promotion, lead to positive changes in the current social norms of shame and blame,

and protect SWs from violence and abuse (5, 55, 56). A study of legal and an unlicensed (illegal) sector in Queensland, Australia provided evidence that decriminalization of sex work led to improved health (102). More than half of the illegal SWs in the Australian study reported being raped by clients in the past year, compared to 3% of brothel-based and 15% of private SWs (102). In addition, illegal SWs often resorted to work on the street – increasing assault, rape, unsafe sex, and causing and exacerbating health issues (103).

All or most African countries criminalize sex work which denies the rights of women to choose sex work as profession, and may lead to lower self-esteem and lower health services use (45). Although South Africa has recognized the need to include SWs in official strategies like the NSP it is still debating decriminalization (18), but studies show that decriminalization could help to minimize violence and stigma, and, in turn, improve satisfaction and use of health services (50, 102).

Economic Empowerment

Since many FSWs turn to sex work as a viable economic option, studies show that micro-enterprise interventions could help FSWs access alternative means of finance, but more importantly improve their ability to negotiate safer sex and prices with clients. A study in Kenya showed that a micro-enterprise intervention gave FSWs the confidence that led to improved condom negotiation skills, provided independence, and also provided alternative means of earning a living (77).

5.2 Further Research

Understanding the health needs of FSWs underscores their effective access to and satisfaction with health services. There is a strong need for further research on the reasons for non-use or delayed health services utilization, as well as perceptions of illness and health needs. In addition, the Gelberg-Andersen Framework provides a good model that could be used to further develop investigation into the predisposing, enabling and needs factors that are associated with health services utilization and satisfaction with these services.

Research on the physical, emotional, and particularly the mental health needs of FSWs is required. This should extend beyond the effects of HIV and STIs. For example, a study in Mexico noted that sex work has an impact on the entire body and the sex work environment can have other health consequences, like exposure to alcohol and smoking, stress and depression (9). Mellor and Lovell also note that FSWs may recognize mental health problems like depression, but opt to “live with it” rather than seek help (52). Studies on the actual physical, emotional and mental health needs of

FSWs are important. Finally, the link between the use of various health services and actual health outcomes of women doing sex work is an important issue that warrants further research.

Stigmatization, particularly internalized stigma and community discrimination remains a serious problem in African societies. There have been few studies on internalized stigma and the social identity of the FSW, and how this could be a serious barrier to implementing interventions and accessing health services (83, 84). Research should also focus on the role of gatekeepers and health care providers.

A study of an intervention in a South African mining community that showed that social, cultural and historical context is important, and the high numbers of migrant FSWs (74, 79) points to a need for investigation into how cultural and social factors affect interventions.

Finally a needs assessment and mapping of FSW population would help to pinpoint the health needs, locations and size of population to provide adequate, accessible and acceptable health services.

References

1. World Health Organisation. Preventing HIV in sex work settings in sub-Saharan Africa Geneva WHO 2011 [Cited April 2011]. Available from: http://www.afro.who.int/index.php?option=com_docman&task=doc_download&gid=6317.

2. Richter M, Palmary I, Veary J, Chersich MF, Nyangairi B, Jankelowich, et al. Investigation into the demand and supply of adult entertainment and paid sex during the 2010 soccer World Cup Johannesburg University of the Witwatersrand 2010.

3. Dunkle KL, Jewkes RK, Brown HC, Gray GE, McIntryre JA, Harlow SD. Transactional sex among women in Soweto, South Africa: prevalence, risk factors and association with HIV infection. Social science & medicine. 2004;59(8):1581-92. Epub 2004/07/29.

4. Karim QA, Karim SS, Soldan K, Zondi M. Reducing the risk of HIV infection among South African sex workers: socioeconomic and gender barriers. Am J Public Health. 1995;85(11):1521-5. Epub 1995/11/01.

5. Scorgie F, Chersich MF, Ntaganira I, Gerbase A, Lule F, Lo YR. Socio-Demographic Characteristics and Behavioral Risk Factors of Female Sex Workers in Sub-Saharan Africa: A Systematic Review. AIDS Behav. 2011. Epub 2011/07/14.

6. Vandepitte J, Lyerla R, Dallabetta G, Crabbe F, Alary M, Buve A. Estimates of the number of female sex workers in different regions of the world. Sex Transm Infect. 2006;82 Suppl 3:iii18-25. Epub 2006/06/01.

7. World Health Organisation. Preventing HIV among sex workers in sub-Saharan Africa: a literature review Geneva WHO 2011 [cited January 2012]. Available from: http://whqlibdoc.who.int/publications/2011/9789241501279_eng.pdf.

8. Chacham AS, Diniz SG, Maia MB, Galati AF, Mirim LA. Sexual and reproductive health needs of sex workers: two feminist projects in Brazil Reproductive Health Matters. 2007;15(29):108-18.

9. Choudhury SM. "As prostitutes, we control our bodies": perceptions of health and body the in the lives of establishment-based female sex workers in Tijuana, Mexico Culture, Health & Sexuality. 2010;12(6):677-89.

10. Ward H, Day S. What happens to women who sell sex? Report of a unique occupational cohort. Sex Transm Infect. 2006;82(5):413-7. Epub 2006/06/23.

11. Duff P, Shoveller J, Zhang R, Alexson D, Montaner JS, Shannon K. High lifetime pregnancy and low contraceptive usage among sex workers who use drugs- an unmet reproductive health need. BMC Pregnancy Childbirth. 2011;11:61. Epub 2011/08/20.

12. World Health Organization. Global HIV/AIDS response: epidemic update and health sector progress towards universal access: progress report 2011. Geneva WHO 2011 [cited January 2012]. Available from: http://whqlibdoc.who.int/publications/2011/9789241502986_eng.pdf.

13. UNAIDS. Sub-Saharan Africa. Regional Fact Sheet [Internet]. 2012 December 2012 December 2012]. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2012/gr2012/2012_FS_regional_ssa_en.pdf.

14. UNAIDS. Global Report: UNAIDS Report on the Global Epidemic, 2010. Geneva: UNAIDS 2010 [Cited April 2011]. Available from: http://www.unaids.org/globalreport/documents/20101123_GlobalReport_full_en.pdf.

15. UNAIDS. Global report: UNAIDS report on the global AIDS epidemic 2012. Geneva UNAIDS 2012 [Cited December 2012]. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2012/gr2012/20121120_UNAIDS_Global_Report_2012_en.pdf.

16. Dunkle KL, Beksinska ME, Rees VH, Ballard RC, Htun Y, Wilson ML. Risk factors for HIV infection among sex workers in Johannesburg, South Africa. Int J STD AIDS. 2005;16(3):256-61. Epub 2005/04/15.

17. Williams BG, Taljaard D, Campbell CM, Gouws E, Ndhlovu L, Van Dam J, et al. Changing patterns of knowledge, reported behaviour and sexually transmitted infections in a South African gold mining community. AIDS. 2003;17(14):2099-107. Epub 2003/09/23.

18. South African National AIDS Council. National Strategic Plan on HIV, STIs and TB, 2012-2016 Pretoria: SANAC 2011 [cited March 2012]. Available from: http://www.sanac.org.za/files/uploaded/NSPabf.pdf.

19. UNAIDS. UNAIDS Guidance Note on HIV and Sex Work. Geneva UNAIDS 2009 [Cited April 2011]. Available from: http://data.unaids.org/pub/BaseDocument/2009/jc1696_guidance_note_hiv_and_sexwork_en.pdf.

20. Karim QA, Sibeko S, Baxter C. Preventing HIV infection in women: a global health imperative Clinical Infectious Diseases 2010;50(Suppl. 3):S122-S9.

21. UNAIDS. How to Get to Zero: World AIDS Day Report, 2011. Geneva: UNAIDS; 2011 [Cited December 2011]. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/JC2216_WorldAIDSday_report_2011_en.pdf.

22. Wechsberg WM, Luseno WK, Lam WK, Parry CD, Morojele NK. Substance use, sexual risk, and violence: HIV prevention intervention with sex workers in Pretoria. AIDS Behav. 2006;10(2):131-7. Epub 2006/02/17.

23. Chersich MF, Rees VH. Vulnerability of women in southern Africa to infection with HIV: biological determinants and priority health sector interventions AIDS. 2008;22(Suppl. 4):S27-S40.

24. Desmond Tutu HIV Foundation, Joint UN Team on HIV and AIDS SA. Key populations, key solutions: a gap analysis and recommendations for key populations in South Africa, and recommendations for the National Strategic Plan for HIV/AIDS, STIs and TB (2012-2016) 2011 [cited March 2012]. Available from: http://www.migration.org.za/publication/report/2011/key-populations-key-solutions-gap-analysis-and-recommendations-key-populatio.

25. Li Q, Li X, Stanton B. Alcohol use among female sex workers and male clients: an integrative review of global literature Alcohol & Alcoholism. 2010;45(2):188-99.

26. Wechsberg WM, Wu L-T, Zule WA, Parry C, Browne FA, Luseno WK, et al. Substance abuse, treatment needs and access among female sex workers and non-sex workers in Pretoria, South Africa. Substance Abuse Treatment, Prevention, and Policy 2009;4(11):1-11

27. Buckingham RW, Moraros J, Bird Y, Meister E, Webb NC. Factors associated with condom use among brothel-based female sex workers in Thailand. AIDS Care. 2005;17(5):640-7. Epub 2005/07/23.

28. Godin G, Tinka Bah A, Sow A, Minani I, Morin D, Alary M. Correlates of condom use among sex workers and their boyfriends in three West African countries. AIDS Behav. 2008;12(3):441-51. Epub 2007/08/22.

29. Goldenberg SM, Strathdee SA, Gallardo M, Rhodes T, Wagner KD, Patterson TL. "Over here, it's just drugs, women and all the madness": The HIV risk environment of clients of female sex workers in Tijuana, Mexico. Social science & medicine. 2011;72(7):1185-92. Epub 2011/03/19.

30. Wojcicki JM, Malala J. Condom use, power and HIV/AIDS risk: sex-workers bargain for survival in Hillbrow/Joubert Park/Berea, Johannesburg. Social science & medicine. 2001;53(1):99-121. Epub 2001/05/31.

31. Gelberg L, Andersen RM, Leake BD. The Behavioral Model for Vulnerable Populations: application to medical care use and outcomes for homeless people. Health Serv Res. 2000;34(6):1273-302. Epub 2000/02/02.

32. Sex Workers Education and Advocacy Taskforce. Development of Report for SWEAT National Sex Worker Programme Evaluation. Cape Town SWEAT 2012 [cited 2012 September 2012]; Available from: http://www.nacosa.org.za/media/39606/2012-09-18_tor_sweat_programme_evaluation_consultant_1_.pdf.

33. Luseno WK, Wechsberg WM, Kline TL, Ellerson RM. Health services utilization among South African women living with HIV and reporting sexual and substance-use risk behaviors. AIDS Patient Care STDS. 2010;24(4):257-64. Epub 2010/04/10.

34. Andersen RM. Revisiting the behavioral model and access to medical care: does it matter? J Health Soc Behav. 1995;36(1):1-10. Epub 1995/03/01.

35. Andersen R, Newman JF. Societal and individual determinants of medical care utilization in the United States. Milbank Mem Fund Q Health Soc. 1973;51(1):95-124. Epub 1973/01/01.

36. Myers BJ, Louw J, Pasche SC. Inequitable access to substance abuse treatment services in Cape Town, South Africa. Subst Abuse Treat Prev Policy. 2010;5:28. Epub 2010/11/16.

37. Asadi-Lari M, Packham C, Gray D. Need for redefining needs. Health and quality of life outcomes. 2003;1:34. Epub 2003/09/12.

38. Wong WCW, Gray SA, Ling DC, Holroyd EA. Patterns of health care utlization and health behaviors among street sex workers in Hong Kon. Health Policy. 2005;77:140-8.

39. Peltzer K, Seoka P, Raphala S. Characteristics of female sex workers and their HIV/AIDS/STI knowledge, attitudes and behaviour in semi-urban areas in South Africa Curationis. 2004.

40. Ghimire L, Smith WC, van Teijlingen ER. Utilisation of sexual health services by female sex workers in Nepal. BMC Health Serv Res. 2011;11:79. Epub 2011/04/20.

41. Rosenheck R, Ngilangwa D, Manongi R, Kapiga S. Treatment-seeking behavior for sexually transmitted infections in a high-risk population. AIDS Care. 2010;22(11):1350-8. Epub 2010/07/17.

42. Blankenship KM, Burroway R, Reed E. Factors associated with awareness and utilisation of a community mobilisation intervention for female sex workers in Andhra Pradesh, India. Sex Transm Infect. 2010;86 Suppl 1:i69-75. Epub 2010/03/05.

43. Gould C, Fick N. Selling sex in Cape Town: sex work and human trafficking in a South African city Pretoria: Institute for Security Studies 2008 March 2012]. Available from: http://www.iss.co.za/pgcontent.php?UID=3797.

44. Beksinska ME, Smit JA, Mantell JE. Progress and challenges to male and female condom use in South Africa. Sexual health. 2012;9(1):51-8. Epub 2012/02/22.

45. Scheibe A, Drame FM, Shannon K. HIV Prevention among Female Sex Workers in Africa Journal of Social Aspects of HIV/AIDS 2012;9(3):167-72.

46. Campbell C. Selling sex in the time of AIDS: the psycho-social context of condom use by sex workers on a Southern African mine. Social science & medicine. 2000;50(4):479-94. Epub 2000/01/21.

47. Richter M, Luchters S, Ndlovu D, Temmerman M, Chersich MF. Female sex work and international sport events - no major changes in demand or supply of paid sex during the 2010 Soccer World Cup: a cross-sectional study. BMC public health. 2012;12:763. Epub 2012/09/13.

48. Wechsberg WM, Luseno W, Riehman K, Karg R, Browne F, Parry C. Substance use and sexual risk within the context of gender inequality in South Africa. Subst Use Misuse. 2008;43(8-9):1186-201. Epub 2008/07/24.

49. Fick N. Sex workers speak out: policing and the sex industry. SA Crime Quarterly. 2006;15:13-8.

50. Seib C, Fischer J, Najman JM. The health of female sex workers from three industry sectors in Queensland, Australia. Soc Sci Med. 2009;68(3):473-8. Epub 2008/11/26.

51. Rossler W, Koch U, Lauber C, Hass AK, Altwegg M, Ajdacic-Gross V, et al. The mental health of female sex workers. Acta Psychiatr Scand. 2010;122(2):143-52. Epub 2010/01/29.

52. Mellor R, Lovell A. The lived experience of UK street-based sex workers and the health consequences: an exploratory study. Health promotion international. 2012;27(3):311-22. Epub 2011/07/06.

53. Kurtz SP, Surratt HL, Kiley MC, Inciardi JA. Barriers to health and social services for street-based sex workers. J Health Care Poor Underserved. 2005;16(2):345-61. Epub 2005/06/07.

54. Lazarus L, Deering KN, Nabess R, Gibson K, Tyndall MW, Shannon K. Occupational stigma as a primary barrier to health care for street-based sex workers in Canada. Cult Health Sex. 2012;14(2):139-50. Epub 2011/11/17.

55. Scambler G, Paoli F. Health work, female sex workers and HIV/AIDS: global and local dimensions of stigma and deviance as barriers to effective interventions. Social science & medicine. 2008;66:1848-62.

56. Richter M. Sex work and the 2010 FIFA World Cup: time for public health imperatives to prevail. Globalization and Healht 2010;6(1):1-6.

57. Booth RE, Kwiatkowski CF, Weissman G. Health-related service utilization and HIV risk behaviors among HIV-infected injection drug users and crack smokers Drug Alcohol Depend. 1999;55:69-78.

58. Jeal N, Salisbury C. A health needs assessment of street-based prostitutes: cross-sectional survey. Journal of Public Health 2004;26(2):147-51.

59. Lieber E, Li L, Wu Z, Rotheram-Borus MJ, Guan J. HIV/STD stigmatization fears as health-seeking barriers in China AIDS and Behavior. 2006;10(5):463-71.

60. Evans C, Lambert H. Health-seeking strategies and sexual health among female sex workers in urban India: implications for research and service provision Social science & medicine. 1997;44(12):1791-803.

61. Lane T. HIV research among township men who have sex with men in South Africa In: Reddy V, Sandfort T, Rispel L, editors. From Social Silence to Social Science: Same-sex sexuality, HIV & AIDS and Gender in South Africa. Cape Town HSRC Press 2009.

62. Richter M. Sex work, reform initiatives and HIV/AIDS in inner-city Johannesburg African Journal of AIDS Research 2008;7(3):323-33.

63. South Africa. National Department of Health. HIV and AIDS and STI Strategic Plan for South Africa, 2007-2011. Pretoria Government Printers 2007 [Cited April 2011]. Available from: http://www.doh.gov.za/docs/misc/stratplan-f.html

64. South Africa. National Department of Health. Country progress report on the declaration of commitment on HIV/AIDS, 2010 report. 2010 March 2012

]. Available from:
http://www.unaids.org/en/dataanalysis/monitoringcountryprogress/progressreports/2010countries/southafrica_2010_country_progress_report_en.pdf.

65. Blankenship KM, West BS, Kershaw TS, Biradavolu MR. Power, community mobilization, and condom use practices among female sex workers in Andhra Pradesh, India. AIDS. 2008;22 Suppl 5:S109-16. Epub 2009/01/07.

66. Cornish F, Campbell C. The social conditions for successful peer education: a comparison of two HIV prevention programs run by sex workers in India and South Africa. Am J Community Psychol. 2009;44(1-2):123-35. Epub 2009/06/13.

67. Richter M, Delva W, De Koker P, Temmerman M, Chersich MF. Sex work during the 2010 FIFA World Cup: Results from two three-wave cross-sectional surveys Unpublished article. [unpublished article]. In press 2011.

68. Joubert G. Exploring, summarising and presenting data. In: Joubert G, Ehrlich R, editors. Epidemiology: a research manual for South Africa Cape Town Oxford University Press 2007.

69. Acock AC. A Gentle Introduction to Stata 3rd Edition ed. College Station, Texas Stata Press c2010. 393 p.

70. Maxwell JA. Qualitative research design : an interactive approach. 2nd ed. Thousand Oaks, CA: Sage Publications; 2005. xiv, 174 p. p.

71. Mack N, Woodsong C, MacQueen KM, Guest G, Namey E. Qualitative research methods overview Qualitative research methods: a data collector's field guide Family Health International 2005

72. South Africa. Department of Health. South Africa: Demographic and Health Survey, 2003 Pretoria Department of Health 2007 January 2013]. Available from: http://www.info.gov.za/view/DownloadFileAction?id=90143.

73. Blankenship KM, Biradavolu MR, Jena A, George A. Challenging the stigmatization of female sex workers through a community-led structural intervention: learning from a case study of a female sex worker intervention in Andhra Pradesh, India. AIDS Care. 2010;22 Suppl 2:1629-36. Epub 2011/01/05.

74. Richter M, Chersich MF, Vearey J, Sartorius B, Temmerman M, Luchters S. Migration Status, Work Conditions and Health Utilization of Female Sex Workers in Three South African Cities. J Immigr Minor Health. 2012. Epub 2012/12/15.

75. Stadler J, Delany S. The 'healthy brothel': the context of clinical services for sex workers in Hillbrow, South Africa Culture, Health & Sexuality 2006;8(5):451-63.

76. Shannon K, Bright V, Duddy J, Tyndall MW. Access and utilization of HIV treatment and services among women sex workers in Vancouver's Downtown Eastside. J Urban Health. 2005;82(3):488-97. Epub 2005/06/10.

77. Odek WO, Busza J, Morris CN, Cleland J, Ngugi EN, Ferguson AG. Effects of micro-enterprise services on HIV risk behaviour among female sex workers in Kenya's urban slums. AIDS Behav. 2009;13(3):449-61. Epub 2008/11/11.

78. Pauw I, Brener L. 'You are just whores: you can't be raped': barriers to safer sex practices among women street sex workers in Cape Town Cult Health Sex. 2003;5(6):465-81.

79. Campbell C, Mzaidume Z. Grassroots participation, peer education, and HIV prevention by sex workers in South Africa. Am J Public Health. 2001;91(12):1978-86. Epub 2001/12/01.

80. Parry CD, Dewing S, Petersen P, Carney T, Needle R, Kroeger K, et al. Rapid assessment of HIV risk behavior in drug using sex workers in three cities in South Africa. AIDS Behav. 2009;13(5):849-59. Epub 2008/03/08.

81. Sarafian I. Process assessment of a peer education programme for HIV prevention among sex workers in Dhaka, Bangladesh : a social support framework. Social science & medicine. 2012;75(4):668-75. Epub 2011/11/08.

82. Rahman SA, Kielmann T, McPake B, Normand C. Healthcare-seeking behaviour among the tribal people of Bangladesh: Can the current health system really meet their needs? J Health Popul Nutr. 2012;30(3):353-65. Epub 2012/10/23.

83. Kerrigan D, Telles P, Torres H, Overs C, Castle C. Community development and HIV/STI-related vulnerability among female sex workers in Rio de Janeiro, Brazil. Health Educ Res. 2008;23(1):137-45. Epub 2007/03/17.

84. Biradavolu MR, Blankenship KM, Jena A, Dhungana N. Structural stigma, sex work and HIV: contradictions and lessons learnt from a community-led structural intervention in southern India. J Epidemiol Community Health. 2012;66 Suppl 2:ii95-9. Epub 2012/06/19.

85. Lafort Y, Geelhoed D, Cumba L, Lazaro CD, Delva W, Luchters S, et al. Reproductive health services for populations at high risk of HIV: Performance of a night clinic in Tete province, Mozambique. BMC Health Serv Res. 2010;10:144. Epub 2010/05/29.

86. Sarkar K, Bal B, Mukherjee R, Saha MK, Chakraborty S, Niyogi SK, et al. Young age is a risk factor for HIV among female sex workers--an experience from India. J Infect. 2006;53(4):255-9. Epub 2006/01/03.

87. Phrasisombath K, Thomsen S, Sychareun V, Faxelid E. 'Health is wealth and wealth is health' - perceptions of health and ill-health among female sex workers in Savannakhet, Laos2013.

88. Platt L, Grenfell P, Fletcher A, Sorhaindo A, Jolley E, Rhodes T, et al. Systematic review examining differences in HIV, sexually transmitted infections and health-related harms between migrant and non-migrant female sex workers. Sex Transm Infect. 2012. Epub 2012/11/01.

89. Saunders JB, Aasland OG, Babor TF, de la Fuente JR, Grant M. Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption--II. Addiction. 1993;88(6):791-804. Epub 1993/06/01.

90. Ewing JA. Detecting alcoholism. The CAGE questionnaire. JAMA : the journal of the American Medical Association. 1984;252(14):1905-7. Epub 1984/10/12.

91. Barrington C, Latkin C, Sweat MD, Moreno L, Ellen J, Kerrigan D. Talking the talk, walking the walk: social network norms, communication patterns, and condom use among the male partners of female sex workers in La Romana, Dominican Republic. Social science & medicine. 2009;68(11):2037-44. Epub 2009/04/10.

92. Basu A, Dutta MJ. Participatory change in a campaign led by sex workers: connecting resistance to action-oriented agency. Qual Health Res. 2008;18(1):106-19. Epub 2008/01/05.

93. Jana S, Basu I, Rotheram-Borus MJ, Newman PA. The Sonagachi Project: a sustainable community intervention program. AIDS Educ Prev. 2004;16(5):405-14. Epub 2004/10/20.

94. Swendeman D, Basu I, Das S, Jana S, Rotheram-Borus MJ. Empowering sex workers in India to reduce vulnerability to HIV and sexually transmitted diseases. Social science & medicine. 2009;69(8):1157-66. Epub 2009/09/01.

95. Loff B, Overs C, Longo P. Can health programmes lead to mistreatment of sex workers? Lancet. 2003;361(9373):1982-3. Epub 2003/06/13.

96. Cornish F, Campbell C. The social conditions for successful peer education: a comparison of two HIV prevention programs run by sex workers in India and South Africa Am J Community Psychol. 2009;44:123-35.

97. Cornish F, Ghosh R. The necessary contradictions of 'community-led' health promotion: a case study of HIV prevention in an Indian red light district Social Science & Medicine. 2007;64:496-507.

98. Kerrigan D, Ellen JM, Moreno L, Rosario S, Katz J, Celentano DD, et al. Environmental-structural factors significantly associated with consistent condom use among female sex workers in the Dominican Republic. AIDS. 2003;17(3):415-23. Epub 2003/01/31.

99. UNAIDS. Sex work and HIV/AIDS: UNAIDS technical update UNAIDS Best Practice Collection [Internet]. 2002 April 2011. Available from: http://data.unaids.org/publications/IRC-pub02/jc705-sexwork-tu_en.pdf.

100. South Africa. Department of Health. National Core Standards for Health Establishments in South Africa. Tshwane South Africa. National Department of Health. ; 2011 January 2013]. Available from: http://www.sarrahsouthafrica.org/LinkClick.aspx?fileticket=YnbSHfR8S6Q%3D&tabid=2327.

101. Biradavolu MR, Burris S, George A, Jena A, Blankenship KM. Can sex workers regulate police? Learning from an HIV prevention project for sex workers in southern India. Social science & medicine. 2009;68(8):1541-7. Epub 2009/03/06.

102. Harcourt C, O'Connor J, Egger S, Fairley CK, Wand H, Chen MY, et al. The decriminalization of prostitution is associated with better coverage of health promotion programs for sex workers. Aust N Z J Public Health. 2010;34(5):482-6. Epub 2010/11/03.

103. Ross MW, Crisp BR, Mansson SA, Hawkes S. Occupational health and safety among commercial sex workers. Scand J Work Environ Health. 2012;38(2):105-19. Epub 2011/08/03.

Appendix A: Questionnaire for World Cup Study

Participant ID: |___|___|___| - |___||____||___||___|	Page 1 of 10

QUESTIONNAIRE FOR WORLD CUP STUDY
PHASE 1 (PRE-WORLD CUP)
HILLBROW

English Version dated 20 May 2010

Have you:	Tick
Explained the study to the participant?	
Both filled out the Consent form?	
Given a copy of the Information Sheet to the participant?	

Date: |____|____|_____|
dd mm yyyy

1) Interviewer number: |____|____|

2) Interviewer's initials: |____|____|

3) Start Time: |____|____|

4) Place of interview: _____

Categories	Codes	Skip
During Research Focus Group Discussion	1	
Street	2	
Inside brothel/hotel	3	
Inside house	4	
Health clinic	5	
During training	6	
Other (please state)_____	7	

Participant ID: |___|___|___| - |___||____||___||___|	Page **2** of **10**

No.	Questions and filters	Categories	Codes	Skip
SECTION 1: DEMOGRAPHICS I am going to start by asking you some questions about yourself. Please try and relax, there are no right or wrong answers. Remember that everything you tell me will be kept secret and that you can refuse to answer any question you do not wish to answer.				
Q001	What is your age in years?		|___|___| Years	
Q002	What is your gender?	Female Male Transgender	1 2 3	
Q003	How many dependants do you have (people you provide for)?	Number of children (below 18 years) Number of adults	|___|___| |___|___|	
Q004	Do you have a husband/permanent partner/boyfriend/girlfriend?	Yes No	1 2	⇩ **Q006**
Q005	Are you currently living with your husband/ permanent partner/boyfriend/girlfriend?	Yes No	1 2	
Q006	What is your highest level of education? **Note to Researcher:** "Tertiary training" can mean any training after completing high school – for example university degree, going to a college, going to nursing school or doing a diploma. The person did not have to finish the degree/certificate/training	None Did not complete primary school Completed primary school Did not complete high school Completed high school Any tertiary training Don't know No Response	1 2 3 4 5 6 99 98	

Participant ID: |___|___|___| - |___||____||___||___|	Page **3** of **10**

No.	Questions and filters	Categories	Codes	Skip
SECTION 2: MIGRATION HISTORY Now I am going to ask you a couple of questions about where you come from.				
Q007	In what country were you born?	South Africa	1	
		_____		_____
		Zimbabwe	2	⇩Q011
		Mozambique	3	
		Malawi	4	
		Swaziland	5	
		Lesotho	6	⇩Q011
		Botswana	7	
		Namibia	8	
		DRC	9	
		Zambia	10	⇩Q011
		Nigeria	11	
		Other	97	
		Specify_____		
		Don't know	99	
		No Response	98	⇩Q011
Q008 SA	If you were born in South Africa, which province were you born in?	Eastern Cape	1	
		Free State	2	
		Gauteng	3	
		KwaZulu-Natal	4	
		Limpopo	5	
		Mpumalanga	6	
		Northern Cape	7	
		North-west Province	8	
		Western Cape	9	
		Don't know	99	
		No Response	98	

Participant ID: |___|___|___| - |___||_____||___||___|	Page **4** of **10**

No.	Questions and filters	Categories	Codes	Skip
Q009 SA	If you weren't born here in [Gauteng], when did you leave the province of your birth?	|____|_____| mm yyyy Don't know No Response Other Specify_____ Not Applicable	 99 98 97 96	
Q010 SA	If you remember, when did you arrive in [Hillbrow]? **Note to Researcher:** If the participant says she can't remember, please probe. Ask her if it was • In the last month • Last 6 months • Last year; or • More than 5 years Write this answer in Specify_____	|____|_____| mm yyyy Don't know No Response Other Specify_____	 99 98 97	⇩**Q013**
Q011 Non-SA	If you remember, when did you leave your home country? **Note to Researcher:** If the participant says she can't remember, please probe. Ask her if it was • In the last month • Last 6 months • Last year; or • More than 5 years Write this answer in at Specify_____	|____|_____| mm yyyy Don't know No Response Other Specify_____	 99 98 97	
Q012 Non-SA	If you remember, when did you arrive in [Hillbrow]? **Note to Researcher:** If the participant says she can't remember, please probe as above	|____|_____| mm yyyy Don't know No Response Other Specify_____	 99 98 97	

Participant ID: |___|____|____| - |___||_____||____||____|	Page **5** of **10**

No.	Questions and filters	Categories	Codes	Skip
SECTION 3: WORK EXPERIENCE Now I am going to ask you a couple of questions about your work. We are halfway through the survey.				
Q013	When did you start in the sex work or adult entertainment industry?	|____|_____| mm yyyy Don't know No Response Other Specify_____	 99 98 97	
Q014	At what age did you first start in the sex work or adult entertainment industry?	|__|__| AGE Don't know No Response Other Specify_____	 99 98 97	
Q015	What did you do for a living before you started in the sex work or adult entertainment industry? **Note to Researcher:** You can circle more than one answer here.	Cashier Waitress Beauty therapist Seamstress/tailor I was still at school/student I have never had a job Hairdresser Other Specify_____ No Response	1 2 3 4 5 6 7 97 98	
Q016	Do you have another way of making money aside from being in the sex work or adult entertainment industry?	Yes No Don't Know No Response	1 2 99 98	 ⇩**Q018** ⇩**Q018**

Participant ID: |___|___|___| - |___||___||___||___|	Page **7** of **10**

No.	Questions and filters	Categories	Codes	Skip
Q020	I would like you to think about your drinking of alcohol. In the past month, how often did you have 5 or more drinks on one occasion?	Never Once or twice Weekly Everyday or almost everyday Don't know No response	1 2 3 4 99 98	
I am going to ask you to think back of your last 2 clients. I am going to ask you some questions about those 2 clients, if that is okay?				
Q021	With your last client, how much did you charge?	Don't know No Response Other Specify_____	R_____ 99 98 97	
Q022	With your last client, what did you have to do? **Note to Researcher:** You can circle more than one answer here.	Vaginal Sex Anal sex Oral Sex Masturbation Don't Know No response Other Specify_____	1 2 3 4 99 98 97	
Q023	With your last client, did the two of you use a condom?	Yes No Don't Know No response Other Specify_____	1 2 99 98 97	
Q024	With your last client, did you feel drunk during the sex?	Yes No Don't Know No response Other Specify_____	1 2 99 98 97	

Participant ID: |___|___|___| - |___||____||___||___|	Page **8** of **10**

No.	Questions and filters	Categories	Codes	Skip
Q025	With your second last client, how much did you charge?		R_____	
		Don't know	99	
		No Response	98	
		Other	97	
		Specify_____		
Q026	With your second last client, what did you have to do? **Note to Researcher:** You can circle more than one answer here.	Vaginal Sex	1	
		Anal sex	2	
		Oral Sex	3	
		Masturbation	4	
		Don't Know	99	
		No response	98	
		Other	97	
		Specify_____		
Q027	With your second last client, did the two of you use a condom?	Yes	1	
		No	2	
		Don't Know	99	
		No response	98	
		Other	97	
		Specify_____		
Q028	With your second last client, did you feel drunk during the sex?	Yes	1	
		No	2	
		Don't Know	99	
		No response	98	
		Other	97	
		Specify_____		
Q029	If you think back of the last week, how many clients do you think you saw in total?	Number of clients	|___|___|	

Participant ID: |___|___|___| - |___||_____||___||___|	Page **9** of **10**

No.	Questions and filters	Categories	Codes	Skip
I am going to ask you to think back of any contact you have had with the police – whether it was good or bad. I am going to ask you some questions about these experiences, if that is okay?				
Q030	If you think about the last month, have you had any contact with the police?	Yes No Don't Know No response Other Specify_____	1 2 99 98 97	⇩Q032
Q031	If you have had any contact with the police in the last month, please tell me about this. **Note to Researcher:** Try and write down the person's exact words.	_____		
Q032	If you think about the past year, have you had any contact with the police?	Yes No Don't Know No response Other Specify_____	1 2 99 98 97	⇩Q034
Q033	If you have had contact with the police in the past year, please tell me about it **Note to Researcher:** Try and write down the person's exact words.	_____		

Participant ID: |___|___|___| - |___||_____||___||___|	Page **10** of **10**

No.	Questions and filters	Categories	Codes	Skip
Q034	If you have had a negative experience with the police, can you tell me about the worst interaction you have ever had in your life with the police. **Note to Researcher:** Try and write down the person's exact words. I f the experience has already been described above then note this and skip to next question	_____		
I am going to ask you to think back of interaction you have had with health care – whether good or bad. I am going to ask you some questions about these experiences, if that is okay?				
Q035	If you think about the last month, have you visited any hospital, clinic, a doctor, nurse, traditional healer, peer educator or a counsellor?	Yes No Don't Know No response Other Specify_____	1 2 99 98 97	
Q036	If you visited any hospital, clinic, a doctor, nurse, traditional healer, peer educator or a counsellor in the last month, please tell me <u>about your most recent experience</u>. **Note to Researcher:** Probe the participant for what type of service they received, from whom, whether the service provider was friendly or unfriendly.	_____		

THANK YOU VERY MUCH FOR YOUR TIME!

End Time: \|____\|____\|

Have you:	Tick
Checked that you have filled in all the Questions?	
Given a voucher to the participant?	

Appendix B: Ethics Approval HREC (Non-Medical) R14/49

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (NON MEDICAL)
R14/49 Richter

CLEARANCE CERTIFICATE	PROTOCOL NUMBER H100 304
PROJECT	Investigation into the demand and supply of adult entertainment and paid s during the 2010 soccer world cup
INVESTIGATORS	Ms M Richter
DEPARTMENT	Forced migration studies
DATE CONSIDERED	12.03.2010
DECISION OF THE COMMITTEE*	Approved Unconditionally
NOTE:	

Unless otherwise specified this ethical clearance is valid for 2 years and may be renewed upon application

DATE 6.04.2010 CHAIRPERSON .....
(Professor R Thornton)

cc: Supervisor : Dr I Palmary

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and ONE COPY returned to the Secretary at Room 10005, 10th Floor, Senate House, University.

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

M Richter
Signature

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix C: Letter of Permission

African Centre for Migration & Society
Wits University
Private Bag 3
Wits
2050

July 10, 2011

Re: Helen Savva, research project, 'Factors associated with the utilization of health services by female sex workers in South Africa'

Dear Ethics Committee,

This letter is a confirmation that Helen Savva (Student # 8063766) will be given access to the data from the "Investigation into the demand and supply of adult entertainment and paid sex during the 2010 soccer world cup" (Protocol # H100304). The dataset will be used as secondary analysis for the above research in partial requirement for fulfillment of a Master of Public Health degree.

This is a dataset that belongs to me and I am the Principal Investigator.

Kind Regards,

Marlise Richter
Principle Investigator,
Investigation into the demand and supply of adult entertainment and paid sex during the 2010 soccer world cup, Protocol # H100304

Email: marlise.richter@wits.ac.za

Appendix D: Ethics Approval M110954

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

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Ms Helen Savva

CLEARANCE CERTIFICATE	M110954
PROJECT	Factors Associated with Utilization of Health Services by Female Sex Workers in South Africa
INVESTIGATORS	Ms Helen Savva.
DEPARTMENT	School Public Health
DATE CONSIDERED	30/09/2011
M1109540DECISION OF THE COMMITTEE*	Approved unconditionally

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

DATE 30/09/2011 **CHAIRPERSON** .....
(Professor PE Cleaton-Jones)

*Guidelines for written 'informed consent' attached where applicable
cc: Supervisor : Ms N Christofides

DECLARATION OF INVESTIGATOR(S)
To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**
PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES...