

FACTORS INFLUENCING THE UPTAKE OF HIV SERVICES BY FEMALE SEX WORKERS IN ETHIOPIA

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Factors influencing the uptake of HIV services by female sex workers in Ethiopia

A thesis submitted in partial fulfilment of the requirement for the degree of Master of Science in Public Health

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Declaration:

Where other people's work has been used (either from a printed source, internet or any other source), this has been carefully acknowledged and referenced in accordance with department requirements. The thesis **(Factors influencing the uptake of HIV services by female sex workers in Ethiopia)**-is my own work.



Signature

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List of abbreviations

AIDS	Acquired immune deficiency syndrome
ANC	Antenatal care
ART	Antiretroviral therapy
DIC	Drop in center
EDHS	Ethiopian demographic health survey
FSWs	Female sex workers
FMHACA	Food, medicines and health care administration and control authority
FP	Family planning
HIV	Human immune virus
HAPCO	HIV prevention and control office
HSTP	Health system transformation plan
HRH	Human resource for health
HTC	HIV testing and counseling
MDG	Millennium development goal
MNCH	Maternal, neonatal child health
MARPs	Most at risk populations
MOH	Ministry of health
NASA	National AIDS spending assessment
NGOs	Non-governmental organizations
SNNPR	South nations nationalities people region
PMTCT	prevention of mother to child transmission
PEP	Post exposure prophylaxis
PSI	Population service international
STI	Sexual transmission infections
TB	Tuberculosis
WHO	World health organization
UNAIDS	United Nations program on HIV and AIDS

Glossary

Definitions of some terms provided in this study are adapted from 2015 UNAIDS terminology guidelines and WHO key terms definition sources (1)(2).

HIV – a Virus that attack the immune system and which result a weak natural body defence from illness over time and ultimately results AIDS

AIDS - The last stage of HIV infections with certain defining symptoms and illness.

Stigma - A negative belief or attitudes that discredit an individual in the eyes of others that results discriminations

Discriminations- “Any forms of arbitrary distinction, exclusion or restriction affecting a person “

Key populations – “Additional populations that are most at risk of acquiring or transmitting HIV, regardless of the legal and policy environment. These includes gay men, transgender people, sex workers, people who inject drugs, prisoners and other incarcerated people”

ART (Antiretroviral therapy)-“Drugs refer to the medicines themselves and use of combination of three or more drugs to achieve viral suppression”

HIV prevalence-“The number of people living with HIV at a specific point in time and is expressed as a percentage of the population”

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Abstract

Background: Female sex workers in Ethiopia are disproportionately infected by HIV and constitute the highest HIV prevalence. Low access to and utilization of HIV related services further exacerbates the risk of HIV infections in FSWs. This study explores the factors that attribute for the uptake of HIV service by female sex workers.

Objective: To explore factors influencing the uptake of HIV services by female sex workers in Ethiopia in order to recommend appropriate intervention measures for the Ministry of Health and HIV/AIDS prevention and control office.

Methodology: A literature review of published and unpublished literature on factors influencing the use of HIV services by female sex workers was conducted. To analyse the finding, a conceptual framework adapted from Anderson's behavioural model of health services utilization.

Finding: low uptake of HIV services by sex workers linked with social factors such as stigma and gender based violence and health services factors. The HIV services lacked confidentiality, privacy and were not providing sex workers friendly services. Health professionals' negative attitudes and discrimination were the major barrier to access of services. Lack of legal support and regulation for female sex workers further exacerbated the problems.

Conclusion: Female sex workers in Ethiopia have limited access and low utilization of HIV services. To improve the uptake of HIV and related services, the identified barriers need to be addressed urgently particularly legal and health care barriers specifically at public facilities. These barriers need to be taken in to consideration while planning and implementing sex workers targeting interventions.

Recommendations: Government, MOH-Ethiopia and other stakeholders to create a policy for a safe environment to increase the access to HIV services for female sex workers. Policy makers should take into account legal and other health services barriers while planning for HIV services.

Key words: Female sex workers, Ethiopia, HIV, AIDS, HIV services

Word count: 12,596

Muluken Damtew Tsegaye –Ethiopia

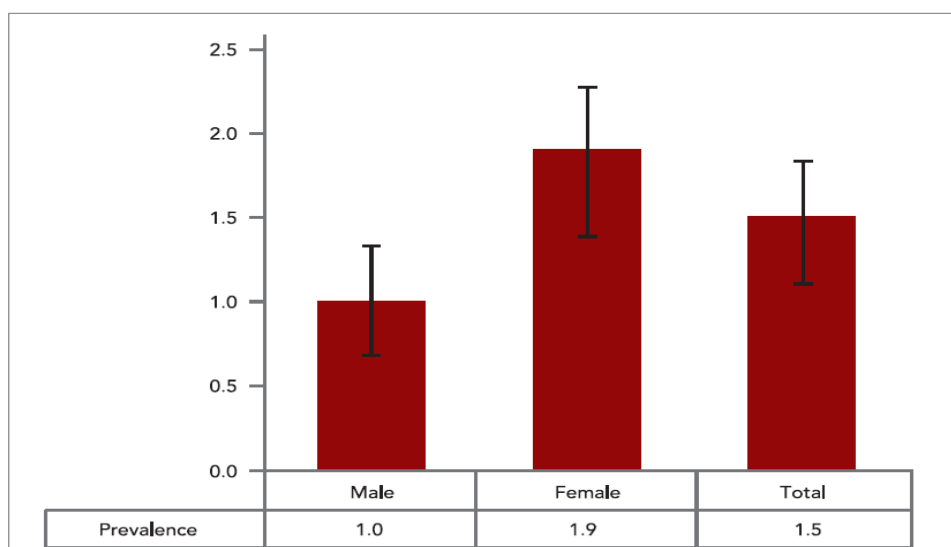
Introduction

According to the World Health Organization (WHO), sex workers are defined as “female, male and transgender adults and people (18 years of age and above) who receive money or goods in exchange for sexual services, either regularly or occasionally ” (3). In Ethiopian context, sex workers are defined as “ females who regularly or occasionally trade sex for money in drinking establishments, night clubs, local drink houses, chat and shisha houses, on the street, around military and refugee camps, construction sites, trade routes, red-light districts, and at their homes ” (4). UNAIDS reports that, globally, HIV prevalence among sex workers is 12 times greater than among the general population and their vulnerability is increased, among others, due to the lack of access to HIV related services (5).

Ethiopia is one of the sub-Saharan African countries that is hard hit by the HIV epidemic. The first AIDS cases were identified in 1986, since then the country has been strongly exposed to AIDS-related illness, deaths and orphaned children. Heterosexual transmission is the predominant route of infection in Ethiopia (6).

The current situation in Ethiopia is that there is a generalized HIV epidemic with considerable heterogeneity among sub-populations and regions (7). According to the latest Ethiopian demographic health survey (EDHS), the adult national HIV prevalence in 2011 was 1.5% and prevalence varies among population groups and geographical areas across the country. For instance, women (1.9%) are more often infected than men (1%) and urban prevalence (4.2 %) is seven times higher than rural prevalence (0.6 %). Significant HIV prevalence variations among the regions is observed, ranging from 0.9 % in southern nations, nationalities, people’s region (SNNPR) to 6.5 % in Gambela (8).

Figure 1: National HIV prevalence by sex (9).



According to the WHO, most at risk populations (MARPs) (described also as “key populations”) include men who have sex with men, sex workers, transgender people, people who inject drugs and people in prisons and other closed settings (10). Due to specific high risk behaviours and practices that heighten their vulnerability to the virus, MARPs are considered at an increased risk of infection with HIV. In addition, their risk of HIV infection is exacerbated by the groups’ limited access to HIV preventive and treatment services (10). The Ethiopian national strategic plan (2010/11-2014/15), uses a somewhat different definition for MARPs than the WHO and includes: long-distance drivers, uniformed forces, female sex workers (FSWs), discordant couples, refugees and migrant labourers, including cross border and mobile populations (11).

Among MARPs in Ethiopia, FSWS are disproportionately infected by HIV and they constitute the largest MARPs populations. A nationwide estimate in 2013 provided around 120,000-160,000 FSWS across the country. The prevalence of HIV in FSWS in 2014 was 23 % while in truck drivers and prisoners were 4.9% and 4.2% respectively. But there is not enough data found on the national prevalence of seasonal labourers (6).

In addition to being the population group at most risk of HIV, FSWs face other problems. For instance a recent study reports high prevalence of violence among sex workers (12). In addition, a significant number of sex workers are involved in substance use which in turn lead to higher engagement in risky sexual behaviours (13). In Ethiopia, HIV has been documented to be declining among the general populace, but the trend is not observed among FSWs. For instance, the national HIV report indicated that overall HIV prevalence in all age groups significantly declined from 5.3 % in 2003 to 1.7 % in 2014 (14). But among FSWs it showed that prevalence of HIV was 25% in 1989 and 2008 and 23.8 % in 2014 compared to 1.5 % for the general population (9) (15).

The expansion of HIV testing and treatment services was credited with significantly reducing new infections by 25 % among the general population. Based on the 2014 HIV surveillance report, the HIV prevalence among 15-24 years age group was 1.7 % while in the age group between 25-34 was 2.6 %. This might show that new HIV infections decline. Better access and increased utilization of HIV services such as HIV testing and counselling, and HIV treatment and care made considerable difference in averting the transmission of HIV infections. For instance, HIV prevalence among pregnant women reduced from 5.6% in 2005, to 3.5 % in 2007, and 2.6 % in 2011 (16). Providing HIV treatment for an infected person, not only improved quality of life people living with HIV, but also prevent further HIV transmission. Following the identification of FSWs as the most at-risk group for HIV infection, Ethiopia launched test and treat strategies in 2016 based on WHO recommendations for FSWs that initiate HIV treatment for sex workers irrespective of CD4 count and clinical stage with targeting 50% reductions of new HIV infection among these part of most at risk populations (17). While Ethiopia is on the path towards turning the tide against HIV, there is a need to examine current interventions and gaps which required a proper response in order to address the high HIV infection rates among Ethiopia's FSWs.

My name is Muluken Damtew. As a clinical health officer I have 10 years' experience in public and non-governmental organizations like MSF, USAID funded projects and private consultancy services. I have been working in TB/HIV, Nutrition and HIV programs in various departments. Most of the time, my work experience was in the field of HIV from service providers of VCT, ART and PMTCT to HIV/AIDS program officer.

During my experience, I observed challenges of getting HIV related services both preventive and treatment services, particularly for some vulnerable populations groups like female sex workers. This study focuses on identifying factors influencing the uptake of HIV related services and evidence based effective interventions to address the current challenges. To analyse the factors that influence the uptake of HIV services for female sex workers in Ethiopia a narrative literature review is utilized. This study is organized in four chapters. Chapter one covers background information about Ethiopia such as education, and health system. Chapter two describes the problem statement, justification, objectives and methodology with explanation of conceptual frame work for this study. Chapter three presents findings of the existing factors that facilitate and prevent HIV services uptake by sex workers. Chapter four provides best experiences from Ethiopia and other countries. Chapter five discusses the study finding and chapter six presents conclusion and recommendations for a better uptake of HIV services for sex workers in Ethiopia.

Chapter 1: Background information

This chapter provides an overview of Ethiopian demography, geography, education, socioeconomic situation and the health system.

1.1 Country profile

Ethiopia is the oldest African independent country and served as a source of the human ancestor and a symbol of African independence since the country maintained its independency during the era of colonization. Since the establishment of the organization of African unity (OAU), the capital, Addis Ababa, has been a seat till today for the African union (AU). Next to Nigeria, the country is second largest in terms of population with a complex variety of nationalities, people and more than 80 different languages spoken (8).

1.2 Geography

Ethiopia is located at the eastern most part of Africa with 1.1 million square kilometres total surface area. Its topographic features range from desert in its eastern part, mountainous in the central and northern part and tropical forest along the south region. Ethiopia shares borders with six countries, with Kenya to the south, with Sudan and South Sudan to the west, with Djibouti and Somalia to the east, and Eritrea to the north.

The climate in Ethiopia is divided into three main zones: tropical rainy where long and heavy rainfall occurs from mid-June to mid-September, dry from October to January, and warm temperature with short and moderate rainfall occurs from February to May (18).

1.3 Demography

According to the national central statistical agency, the Ethiopian population was estimated at 94,352,000 in 2017 with a 2.6% annual growth rate, where women constitutes about 49.8% of the general population. The urban population constitutes 20.3% of the total population (19). The average fertility rate in Ethiopia reported is at 4.1 per woman. Among the general population, 23 % of women are in the reproductive age groups. Generally the young age group (below 15 years) more dominated and constitutes around 45% of the total population where the age group between 15 and 65 years constitutes 51.8% (20).

1.4 Socio-economic status

Ethiopia is a low income country where the service sector and agriculture sector accounts for 40% and 46% of the gross domestic product (GDP). The rest 14 % is attributed by industrial sectors. Generally the country is among one of fast growing economies in the region. But more than half of the population is still under the poverty line (18).

Ethiopia has registered a good social development in the areas of education for the past two consecutive decades. For instance, literacy increased from 26 % in 1996 to 48 % in 2011. Primary schools have expanded and increased from 21 % in 1996 to 93 % to 2014. Secondary education also increased from 9 % in 1996 to 20 % in 2014. Tertiary education increased from 3 universities to more than 33 universities. Despite such improvement, women education is still reported low, particularly at secondary and tertiary level educations. Ethiopia is promoting women empowerment and gender equality, but still women have less access to get their own income than men and access to resources and participation in the community is decided by men either the father or husband (18).

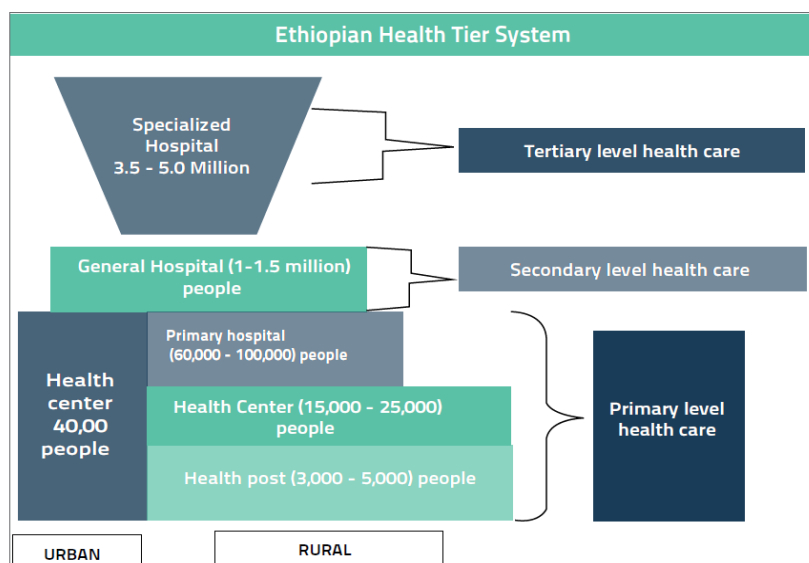
According to the 2011 EDHS report, close to a quarter of Ethiopian women, decision related to individual and family issues that include family planning and place of birth, are made by their husbands. The reports add; early marriage and childbearing and gender based violence are common practice among Ethiopian women (8).

1.5 Health system

Although improvement is observed in the Ethiopian health status, preventable diseases such as HIV and AIDS, Tuberculosis (TB), Malaria, diarrheal diseases and respiratory tract infections, prenatal and maternal deaths are responsible for 74 % of deaths and 81 % of disability adjusted life years lost per year (21). The maternal mortality rate in 2005 and 2011 reported 673 and 676 per 100,000 live births that indicates there were no improvement within these periods.

In Ethiopia, health services are delivered through a three level tier systems based on the principle of primary health care: primary level health care includes primary hospital, health centre, and health post, to provide services for the population of 100,000, 25,000 and 5000 respectively. The secondary level health care consists of a general hospital to serve one million people. The tertiary level health care is composed of a specialized hospital which serves as a referral centre for general hospitals and provides inpatient services (22).

Figure 2: Ethiopian health tier system (22).



The ministry of health (MOH) at the national level and the regional health bureaus at the regional level are the main actors in the development of policy, strategy, guidelines and mobilizing resources and overall monitoring and evaluation of the health care delivery. The district health offices coordinate the operation of the district health system at their level (23). Health extension workers in the public sector provide 16 packages of health services including HIV/AIDS and spent more than 80 % of their time on community outreach programs. It has been serving as one of the main pillars of the health care delivery system to improve access and equity in the delivery of essential health services like HIV, STI and TB, maternal neonatal and child health (MNCH) and sanitation at community level (24).

Health regulations including Safety and quality of health services controlled by food, medicine and health care administration and control authority (FMHACA) which includes the registration, licensing and inspection of health professionals, pharmaceuticals, food establishments, and health institutions. Health care delivered by public and private health sectors including faith based and

humanitarian organizations.(25). The health sector is financed mainly by donors funds, NGOs, and out of pocket payment. Government financing, in the health sector, is low which is about 15.6% of the total health expenditure (26). The national health insurance agency has already been established to initiate a social health insurance for formal sectors and a community-based health insurance for informal sectors. But implementation is not yet started (27).

Chapter 2: Problem statement, justification, objectives, and methodology

This chapter addresses the problem of HIV infection and poor access to HIV related services among female sex workers and the importance of the current study, with general and specific objectives. Study methods are described and the conceptual framework used for this study.

2.1 Problem statement

Female sex workers in Ethiopia have a disproportionately higher HIV prevalence and are at a greater risk of HIV infection than other segments of the population. The high prevalence of HIV among FSWs identified at the onset of Ethiopian's HIV epidemic: around 17 % and 13 % in 1986 and 1988 respectively(28). The impact of HIV after three decades continues and the highest prevalence of HIV is found in female sex workers. Currently, 23 % of FSWs are infected with HIV compared to 1.5 % of the general population (6). Recent studies have shown that the number of FSWs living with HIV has been increasing across all regions of Ethiopia. The capital, Addis Ababa, had a prevalence of 2.1% in FSWs and other urban areas of the country had 2.9 %. The Amhara region, the second largest region of Ethiopia, reported a prevalence of 11.6 % to 37.0 % among FSWs in 2008, which was significantly higher than the national urban prevalence (4.2 %)(29).

Available data suggests that particularly in the transport corridors of Ethiopia, FSWs are among the most HIV infected group. Prevalence among FSWs was 25.3 % compared to 8.6 % for other women in the general population along the transport corridors (6). These transport corridors see the transport of freight between Djibouti and Addis Ababa and other major cities, mainly by trucks which are driven by male drivers.

Beyond the high prevalence of HIV, sex workers are also a hard to reach population regarding access to prevention, care and support services for HIV/AIDS. The 2015 national report showed that the uptake of HIV services among FSWs, were low compared to the general population in Ethiopia. Nationally there is an increasing recognition that female sex workers are in need of a targeted HIV intervention as their general uptake of services is significantly limited (6).

According to Ethiopian epidemiological data, MARPs including female sex workers in Ethiopia have a low access to prevention and treatment services compared to the general populations. Limited targeting intervention for female sex workers including access to HIV related information is reported. (9). Another study also showed that most of the female sex workers were not reached by service providers during targeted intervention activities for sex workers including HIV testing and counselling. The data showed that only 42 % of FSWs were accessed by the program (30). Therefore, it is crucial to identify and address relevant factors that hamper the FSWs' utilization of HIV service uptake from a multilevel perspective.

The central question related to this problem is; what are the factors that influence the uptake of preventive and treatment services for HIV among female sex workers in Ethiopia and which interventions will work best in addressing the barriers identified?

2.2 Justification

Since the first case was identified in 1986, Ethiopia has been working on reducing its HIV infection. The government and other partners played a key role in prevention, treatment and support to avert the epidemic. There is high level of HIV awareness in Ethiopia due to sustained education campaigns. In additions, a large number of HIV-related projects have been implemented in Ethiopia. As result, HIV prevalence dramatically declined in the general populations in recent years but remained high among FSWs (6).

As per the global vision to end AIDS by 2030, Ethiopia is working on reducing HIV infections, and to increase preventive and treatment services for those already infected (6)(31). While the general population has seen a promising decline in HIV prevalence, without addressing the needs of female sex workers including access to HIV services and effective intervention for service utilization, Ethiopia will be unable to attain the 2030 AIDS elimination goal (10).

Due to the nature of their work, infected FSWs have a higher risk of spreading HIV among the populace along with other STIs (3).

Sex workers reported that they were motivated for HIV testing provided by non-governmental organizations like PSI-Ethiopian supported projects. However, they were not as receptive to utilizing public facilities for such testing (32). The factors influencing FSWs' attitudes towards utilizing public and private facilities for HIV activities, require in-depth analysis, in order for a more effective national policy to eliminate HIV in Ethiopia. Such factors also influences how well sex workers can prevent HIV among themselves and to manage their HIV infections, if already infected (10).

There is a research gap in the factors determining the FSWs' access to and utilization of HIV services. Much research with FSWs in Ethiopia has focused more on risky behaviours and income generation activities, not on service access. This study aims to identify factors influencing the uptake of HIV services by FSWs, and providing recommendation for more effective interventions focusing on FSWs.

2.3 Objectives

2.3.1 General Objective

To explore factors, influencing the uptake of HIV services by female sex workers in Ethiopia, in order to recommend appropriate intervention measures to the Ministry of Health and the HIV/AIDS Prevention and Control Office, National policy makers, DKT-Ethiopia and PSI-Ethiopia

2.3.2 Specific objectives

1. To identify the different types and health seeking behaviours of female sex workers in Ethiopia
2. To analyze socio-economic and environmental factors influencing the lives of sex workers
3. To analyze health service factors
4. To identify best practices/interventions targeting sex workers in Ethiopia and other countries
5. To make recommendations to national policy makers to design effective interventions to address the uptake of HIV prevention services by female sex workers in Ethiopia

2.4 Methodology

This is a qualitative, exploratory study, using literature review as a main methodology, through different data sources, i.e. Google scholar, Pub med, VU data base and the MOH-Ethiopia website. Personal experience and observation in the field of HIV is also considered. Additional search is conducted to find best practices in Ethiopia and other countries. To find out relevant literatures the following key words were used separately and in combination: " HIV", " AIDS", "Female sex worker", "Ethiopia", "HIV service", "Health services", "sub-Saharan Africa", "intervention", "Policy", "acceptability", "affordability", "accessibility", "acceptability", "quality", "access", and "utilization", "determinant factors", " stigma ", Gender based Violence", "Health behaviors ", " typology of sex workers", "Legal status of sex workers", . Boolean operators "and"/ "or" used with key words combinations to get more result.

Moreover, Grey literature from national MOH and FHAPCO sources was used like EDHS, HSTP and the MDGs report. The Anderson Model of health care utilization used as a guide to analyse factors influencing HIV related health services among female sex workers.

Table 1: Search table

Source	Search words used per objective			
	Objective 1	Objective 2	Objective 3	Objective 4
Google scholar, PubMed, VU e-library	"sex workers, Ethiopia"; " sex workers, health services " ; " sex workers, health behaviours "	" sex workers, stigma" ; " sex workers, Violence, Ethiopia " ; "sex workers, HIV, Ethiopia "	"sex workers, health facilities"; " sex workers, HIV service"; " sex workers, health providers"; " sex workers, HIV testing "; " sex workers, HIV treatment"; " sex workers, stigma, health workers " ; "sex workers, HIV services, availability"; " sex workers, HIV service, accessibility"; "sex workers, HIV services, affordability"; "sex workers, HIV services, quality "	"Sex workers intervention", " sex workers response", " sex workers, interventions, Africa"; " sex workers, intervention, HIV, Ethiopia"; " sex workers, HIV, interventions, Africa "
MOH-Ethiopia website, HAPCO, WHO, UNAIDS	" HIV report, Ethiopia"; " sex workers, Ethiopia"	" sex workers, legal status, Ethiopia"; " female sex workers, Policy, strategies, Ethiopia"; " HIV guideline", "MARPs, Ethiopia "	" HIV policy", " HIV program ", "sex workers, HIV policy"; " sex workers treatment	" HIV policy", " HIV guidelines ", "HIV program "

2.5 Conceptual frame work

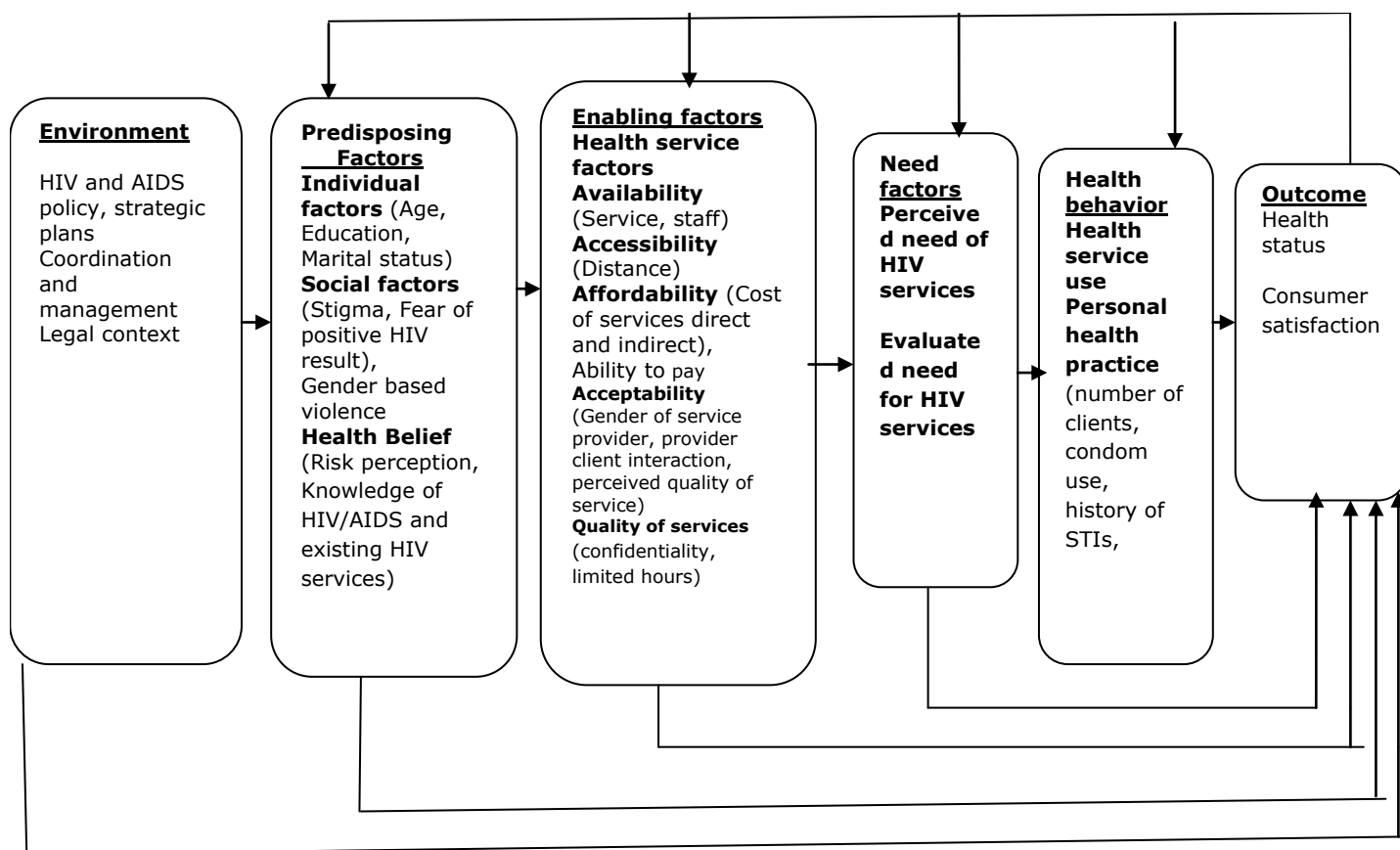
In order to analyse factors influencing the uptake of HIV services response for female sex workers in Ethiopia the Andersen framework of health services utilization 1995 has been adopted as the conceptual framework guiding the analysis.

I have searched different conceptual frame works to analyse factors contributing for health service response for HIV services among female sex workers. For instance, I have seen a socioecological model but the model was mostly used for prevention and was more suitable in the study of factors to sustain prevention efforts. This model has a limited scope compared to Andersons model to study the service uptake.

I found the Andersen model important to identify factors that enable or hinder the use of services related to HIV by female sex workers at the environment and population level. Furthermore, the model guides to explain the sex worker's behaviours that could result in health outcomes included perceived health status, evaluated health status and consumer satisfactions. The Andersen framework explores the environment and population characteristics with reference to effect of individual health behaviour. The environment contains the health care system, including HIV related policy and strategies, resources and legal context. The characteristics of the population, that determines individual use of health services, were described as predisposing, enabling and need factors.

Based on the model as a guide in this study, environmental factors, population characteristics, in this case the population are female sex workers, health behaviour factors of female sex workers, will be examined to analyze factors influencing the uptake of HIV services for these part of most at risk sub populations (FSWs) in Ethiopia.

Figure 3: Conceptual framework of access and utilization of health services; adapted from Anderson's model (33).



2.6 Inclusion criteria

Data, reports and studies about female sex workers related to HIV/AIDS, which are written in the English language, will be included. In addition to that, articles are included if available with full text. Most of the documents are from the year 2011-2017. Some data is from 2006-2010. Five documents are quite old since revised and updated documents were not found.

2.7 Limitation

Studies written in other language besides English are not included that may have relevant information for this study. Some literatures in the context of Ethiopia could not be found, for instance the coverage of HIV treatment and the response among sex workers. However, studies conducted in other African countries, with similar context, were used to analyze the finding. Preliminary 2016 EDHS was found but the report doesn't have up-to-date prevalence of HIV but rather contains knowledge of HIV among general populations. This gap could make having recent data difficult. Since the study for this thesis is mainly based on a literature review, it may not provide enough in-depth and contextualized information compared to a primary data collection.

Chapter 3: Literature finding and analysis

This chapter explores the findings and analysis from literatures conducted in Ethiopia and other countries similar to the Ethiopian context and relevant to the study will be presented to identify factors influencing the uptake of HIV services by FSWs in Ethiopia. The chapter starts by identifying types of sex workers in Ethiopia and will discuss environmental, predisposing, enabling and need factors.

3.1 Typology of sex workers in Ethiopia

Generally women working as sex worker can be divided in-to three types in Ethiopia. The first one are women who are working in a venue such as bar, secondly those working on the street and the third are women who are working as waitresses (34). Different types will here to be discussed.

3.1.1 Types of female sex workers

The Establishment of sex workers is categorized as home based (includes phone based sex workers), venue based, and street based. Venue based female sex workers operate at various venues including hotels, bars, Tella and Araki bet (local alcohol drink houses), Khat and shisha houses and red-light houses. Most of the women, who are working in these venues, provide sexual services to their clients who visit these places (35)(36). Studies showed that some of the waitresses in Addis Ababa (35 %) and Nazareth (30 %) are involved in sex work activities in addition to their normal paid job (34).

The women that are working in Tella and Araki, which are (local alcohol drinking house found in Ethiopia) often identified as older, divorced or widowed women are considered as receiving a lower income from sex work than those who are working for other establishments (35).

Home based female sex workers often work from their homes and are to be contacted by phone or via their pimps. They may sell sex from the house where they live or they may go to other places based on their clients' choice. Street based female sex workers are working in public places and actively solicit clients and are often working in the evenings and are picked up by clients. They seem to be more exposed to physical and sexual violence than the other categories of sex workers. According to a study, conducted in 17 major towns in Ethiopia, the majority of sex workers were venue based (51.8%), home and street based were 25.5% and 19.3 % respectively. Generally sex workers operates during the evening and night time (35)(36).

3.1.2 Socioeconomic status of female sex workers

A study shows that lack of financial resources and poverty forced women to engage in sex work in the first place (37). Generally, this situation continues as female sex workers in Ethiopia have poor economic conditions and a low level of education. In addition, it has been reported that around 43 % of sex workers are expected to send financial support for their family (4). Venue based and home based sex workers are earning more income compared to street based sex workers (35).

3.2 Environment

These factors are the underlining factor at the environmental level that influence the uptake of services. Both health care system and other external factors are included in this section play a big role in preventing and facilitating services utilization by FSWs. HIV policy and strategies, and coordination described in the health care system factors and legal context stated in external environment factor in this section.

3.2.1 Health care system

The Ethiopian health service system is decentralized in nine regions. Since 1990s the health system has expanded in an increasing number of facilities, medical schools, human resources and health services coverage such as immunization, antenatal and family planning (22). Availability of such physical infrastructures and health professionals did not guarantee utilization. For instance, despite the report that describes improved ANC and expand delivery program, a recent study shows that maternal health service utilizations were poor and that was associated with low quality of services. Such poor quality services also expected to limit the use of HIV services and other services by sex workers (38). Similarly, despite a free HIV treatment and care, provided in Ethiopia, nationally FSWs are identified with a low access of HIV services (9).

National available records indicate that the shortage of human resources is one of the main challenges for the Ethiopian health care system, despite improvement in producing the health workers force in the last two decades. Low health worker density with inequitable distribution crippled the health system. This would affect the service deliveries provided to sex workers as well (39)

Table 2: Density of Health care workers in Ethiopia (39).

Indicators	2009	2013	International benchmarks
Total Health worker density	0.84 per 1000	1.3 per 1000	2.3 per 1000 (WHO)
Physicians	1 per 42706	1 per 23700	1 per 10000
Nurses	1 per 5000	1 per 1890	1 per 5000
Midwifery	1 per 57000	1 per 12227	

Among the components of Ethiopian prevention and control of major disease burdens, HIV is one of the key programmatic areas (22). The general overview of HIV response is discussed in below.

3.2.2 National HIV policy

In order to guide HIV intervention activities, in 1998 the Ethiopian government developed HIV/AIDS policy under the federal ministry of health. The policy was aimed to provide an enabling environment for prevention and control of HIV/AIDS in Ethiopia. Furthermore, it focused to safeguard the human rights of people living with HIV and access to health services without discrimination. The policy to include empower women, youth and vulnerable groups to prevent them from HIV infections (40).

3.2.3 National HIV strategies

The general strategy prioritized female sex workers and other most at risk populations for provision of HIV prevention education(40).Recently the Ethiopian ministry of health developed and revised the HIV strategic plan for five years, that covers from 2015 -2020 with the goal on prevention of 70,000-80,000 new HIV infections and the saving of 500,000-550,000 lives planed within these implementation periods. One of the strategic objectives developed was implementing a high impact

and targeted prevention program that consists of four priority programs namely condom distribution, sexually transmitted infection control, behavioural change communication and blood safety (6).

Special emphasis is given to female sex workers in the national strategic plans. Currently the Ethiopian HIV testing approach changed from routine to targeting HIV testing in which testing is conducted with populations identified as at high risk exposure. Female sex workers are included in this targeted HIV testing in order to insure that testing reaches those people who are most at risk for HIV. Reaching 90 % HIV prevention coverage of the most at risk population including FSWs and to repeat test to 400,000 FSWs is targeted till 2020 (6).

Reducing incidence of common sexually transmitted infections (STIs) in female sex workers and their clients are mentioned as one of the focus area through conducting syndromic case management at all service delivery points of care. Attention for FSWs has been given in the national policy and strategies but access to HIV related services by FSWs is still limited (6).

3.2.4 HIV funding

The majority of the fund for HIV/AIDS prevention, care, treatment and support in Ethiopia comes from development partners. According to the national AIDS spending assessment (NASA), the total of HIV/AIDS spending in 2011/2012 was \$ 405 million, of which 86 % was funded by external sources, leaving only a total of 13 % from the government through public revenue and only less than 1 % from the private sector (41).

From the total spending, around 34 % and 31 % is spent for targeting and non-targeting programs of people living with HIV (PLHIV). The general population benefited from 24 %. The spending for commercial sex workers was only 0.3 % despite it was reported that more funds were allocated for this most at risk population groups (15) (41).

3.2.5 Coordination and Management

Most of the time, HIV health services for MARPs including FSWs, are conducted by development partner organizations while the government facilitates a supportive environment. For instance, the TransACTION program that was implemented in MARPs, was composed of save the children, population service international (PSI), Marie Stops international and other local NGOs. Gaps in the programs sustainability was observed particularly when the HIV project phased out and noted that activities usually stops since no standard integration to public services. This in turn, affects continuous services provision for sex workers (42).

3.2.6 Legal context

Sex work in Ethiopia is illegal and the criminal law prohibits commercial sex, operating commercial sex venues, profiting from sex work, trafficking and sexual exploitation of minors despite the fact that commercial sex openly and freely is practiced including minors in cities and towns across the country. Generally this law has left female sex workers without legal protection. On the other hand, Ethiopia signed an UN declaration and conventions regarding human rights provision and adapted to the constitution and stated that every Ethiopian has the right to choose their occupation and profession (43).

According to the 2010 national progress report on the UN declaration of commitment on HIV/AIDS, indicated that non-discrimination laws or regulations were proposed to be implemented, for female sex workers and other vulnerable groups by different local organizations such as Ethiopian lawyer associations, women association and teacher association. However, no improved regulation was found for the legal protection of sex workers, rather the government identified the need for targeting HIV interventions for female sex workers. Lack of legal protection is linked as a barrier in

accessing HIV and other health care service during abuse or other problems like rape case as they may not report for post exposure prophylaxis (PEP) of HIV and STIs, and other social services (44).

3.3 Predisposing factors

Predisposing factors addresses female sex workers characteristic that facilitate or hinder use of HIV services related to individual factors, social factors and health belief.

3.3.1 Individual factors

These include variables such as age, education and marital status linked to the uptake of HIV service by female sex workers.

Age

Most of the time sex workers in Ethiopia are in a young age group. Around 71 % are between 15-24 years and an adolescent group (15-19) is comprised of 33 %. In addition, women who sell sex below the age of 15 are common, particularly in Addis Ababa despite the constitution prevents the selling of sex under the age of 18. For the last two decades it has been observed that the median age of female sex workers declined from 31 to 21-22 years (4).

A study in Ethiopia indicated that the younger age group received less HIV services than the older female sex workers from one local NGO, implementing HIV services for sex workers. For instance, among those who received services, about 47 % of sex workers were 20-24 years of age while 27 % of them were 15-19 years age (36).

A review demonstrated that young age sex workers are less likely to access health care services including HIV prevention, care and support. Utilization of sexual reproductive health services and adherence to the treatment and retention in care were limited due to their low level of knowledge and risk perception and other health system related factors such as stigma and discrimination by health providers (45).

Education

The general majority of female sex workers in Ethiopia are uneducated and have a poor socioeconomic background. For instance one-third of sex workers never attended school and around 36 % have less than seven years of educations. A study shows that 65 % of female sex workers in the Amhara region (second largest region of Ethiopia) cannot read and write (4).

There is no stand alone study found regarding education and the uptake of HIV service utilization among FSWs, but in one study it was mentioned that educated sex workers more likely posses good negotiation and communication skills for their health need and may have a better understanding about their rights (12). It is also indicated that a better educational status is linked to better access to HIV information and to be expected to have an increased understanding of the benefits of knowing one's HIV status and leading quality of lives by taking HIV drugs with other supportive treatment (46). This knowledge, sometimes, in turn, might contribute to an increased uptake of HIV services by sex workers, despite the HIV knowledge this not always necessary leads to service utilization.

Marital status

According to the national MARPs guideline report, in Ethiopia, around 64 % of sex workers never get married and if ever married, 87 % of them are divorced (4). Widowed and married sex workers also exist. The majority of sex workers reported that they have an intimate partner or boy friend.

Regarding the influence of sex workers' marital status on HIV services utilization, a study conducted in Kenya revealed that husbands or intimate partners of sex workers served as a source of support to get the HIV related health access. For instance, they provided support to go to the health facility together during treatment follow up or any time needed. Sex workers have been reminded of their appointment date at ART clinic to collect their drugs on time by their partners. Sometimes if sex workers are unable to go to the facility, they shared the responsibility of travelling to the clinic (47).

On the other hand, a study in Ethiopia mentioned that married sex workers are exposed to violence from their partner and this affects their service utilization. Such violence is known as an important barrier for accessing health services (12). A study in other women, among the general populations in Ethiopia also supports this finding that married women are more likely to experience violence and this is associated with a low utilization of maternal health care services (48). These finding seems reasonable since male dominance and domestic violence is common in Ethiopia (49).

3.3.2 Social factors

Stigma

HIV related stigma has been one of the key barriers in HIV prevention, care and treatment program among the general populations in Ethiopia (50).

For more than two decades, female sex workers in Ethiopia, are subjected to various forms of stigmatization from their families, intimate partners, community, police officers and even from their clients (51). A study showed that female sex workers frequently changed their work location, either in the same city or different town, to avoid stigmatization. The stigma was associated with fear of being identified as sex workers and having received a positive HIV result or due to development of a medical complication that might be exposed to sex workers as a HIV infected individual. The study added that such mobility of sex workers prevents them from accessing continuous HIV care and other related health services (52). Such mobility of female sex workers created a challenge to deliver the HIV prevention intervention by NGOs working on sex workers (30).

A study in Uganda also indicated a similar finding that stigma led to sex workers not to use ART despite the clinic was located close to the place where they live. Fears of being identified of living with HIV by their customers, friends and other nearby people were the reason behind stigma(53).

Fear of positive HIV result

HIV testing and counselling has been served as a crucial component of HIV prevention specifically in bringing a behavioural change and reducing the transmission of the virus for the general and key population particularly in low income African countries, as well as serving as a gateway to other HIV-related services such as ART (54). Considering this, the benefit of testing and counselling has been promoted and mobilized at national, regional and community level (55).

A study in Addis Ababa, where the majority of female sex workers exists, showed that sex workers are afraid of undergoing HIV testing due to fear of the outcome of being found HIV positive. The issue of fear about the HIV positive result is regarded as a significant barrier to HIV testing and counselling by female sex workers, and is associated with consequences of a possible loss of job, loss of income and stigma (56). A study in Zambia among female sex workers revealed similar findings and indicated that a significant number of sex workers are never tested for HIV. The main reason reported was; the fear related to a HIV positive result and they preferred to live without knowing their status (57).

Gender based violence

Violence against women, increased vulnerability of HIV infections and other STIs. In addition, violence can be an obstacle in accessing HIV prevention, care and support services (10). Studies elsewhere in Ethiopia identified, that female sex workers experienced violence in the form of sexual, psychological and physical by an intimate partner, regular client and bar or hotel owners. Married FSWs were more affected by sexual violence than non-married FSWs (12)(58). Such kinds of violence has also been linked in Cameroon with barriers to the FSWs' HIV prevention and access to care, treatment and other health services (59).

3.3.3 Health beliefs

In this section, the health beliefs of female sex workers in regard to influence the uptake of HIV services like risk perception, knowledge of HIV and AIDS and existing HIV services are discussed below.

Risk perception

The perception of the HIV risk among female sex workers could affects the use of HIV services, either preventing or facilitating use HIV services.

A study in Nigeria identified a low level of risk perception in contracting HIV infection, in female sex workers, despite a high HIV prevalence and risks of sexual behaviours among these groups. These sex workers didn't consider themselves at risk of HIV due to the belief that God protected them from HIV and diseases. They mentioned also that drugs for HIV are not useful instead relay to God can do better for one's health. The study also added that some sex workers linked HIV infection to their fate and decided to live till their fate allows them without getting tested for HIV and accessing health care services. Such kinds of beliefs may also be present among sex workers in Ethiopia and may lead to an avoidance of utilization of HIV prevention and care services (60).

Knowledge of HIV and AIDS and existing HIV services

According to the Ethiopian available national sources, a considerable number of sex workers reported that they acquired knowledge about HIV, STI and the correct and consistence use of a condom through peer educators, mass media, and outreach workers (61). Evidence has shown that such kinds of knowledge not only helped to decrease the HIV vulnerability but also increased the use of service utilization for further prevention and benefitting from existing services. For instance a study among pregnant mothers in Ethiopia indicated that, those who have a comprehensive knowledge about HIV, prevention of mother to child transmissions (PMTCT) program and a possible transmission to their child were more likely to be tested for HIV (62).

A study in India showed that sex workers who have a good knowledge of HIV and benefit of knowing HIV status, were more inclined to go for HIV testing, because of the understanding of an improving life by taking ART drugs motivated them for HIV testing, particularly sex workers with young children. On the other hand, those with a lack of HIV knowledge did less uptakes of the services and mentioned it as barrier for female sex workers accessing HIV testing (63).

3.4 Enabling factors

Findings on health services related factors such as availability, accessibility, affordability, acceptability and quality of services which affects uptake of HIV related service utilization are discussed below.

3.4.1 Availability

Under this heading, HIV services supplied in the right place and right time for sex workers in order to meet the needs of these MARPs groups to be discussed below.

Since the start of the HIV epidemic, the government of Ethiopia has responded through expanding key interventions aimed at preventing the HIV infection. The US funded a TransACTION project and it was implemented in Ethiopia, targeting MARPs that included female sex workers for a period of five years from 2009-2014 along with the identified transportation routes. The project was aimed at prevention of new HIV infections and it provided HIV testing and counselling and STIs treatment with the involvement of a peer education program. Health care providers were also trained about HIV and STI service provision for sex workers and other MARPs, during the project period (30).

DKT Ethiopia (DKT) with the Temret leHiwot associations, running a wise up project, working on condom promotion for female sex workers and targeting to achieve a 100 % condom use during commercial sex activities (64). The project conducted trainings for sex workers who are working in various establishments about correct and consistency use of a condom (61). The project aimed to cover about 42 Ethiopian cities and 40,000 sex workers in 2011. However, only 12 major cities were covered by the project (61). The project is still working focusing and conducting peer education sessions about consistent use of condoms among sex workers, to reduce the transmission of HIV and other sexual transmitted infections (65).

Public health facilities are the main HIV service providers for general population and sex workers also expected to use these health facilities particularly ART treatment. However, the targeted HIV prevention and treatment for FSWs is not available at public health sectors. Currently the PSI/Ethiopia, the USAID-supported HIV prevention project, is working on MARPs with around 25 local partners in 168 towns. The project is working with targets to reach 80 % of female sex workers in the targeted towns with a reproductive and a combination of HIV prevention services (66).

Thus, although Public health facilities provide HIV services for the general population, targeted sex workers intervention and direct service deliveries are provided by non-governmental and local partner organizations. Studies conducted on sex workers projects, showed that existence of these services made the sex workers access services easily. The same study added a number of sex workers, who tested for HIV, markedly increased after the implementation of the project. For instance, the HIV testing and counselling uptake increased from the base line 44.8 % to 86.7 % during the implementation period of the TransACTION project (30). This finding was consistent with the Kenyan HIV and STIs peer mediated prevention intervention study among sex workers that showed a significant increase in the number of HIV testing after implementation of the five year project (67).

3.4.2 Accessibility

Facilitators and barriers influencing access to HIV prevention and care, in terms of distance, are discussed in this section. Two contrasting responses are reported from sex workers in Ethiopia regarding influence of distance to use HIV services. Some sex workers mentioned that, distance to the health facility, negatively affected the use of HIV testing and counselling. Some described that they are expected to go around for half an hour with the public transport to get the service. On the other hand, some sex workers stated that they prefer to utilize HIV services from facilities found far from the place where they live in order to avoid stigma (56). An Ugandan study shows consistent with the first response of the Ethiopian study that sex workers get better utilized HIV care when they have a facility close to their place (53).

3.4.3 Affordability

Generally public health facilities provide key health services free of charge, including maternal and child health, tuberculosis and HIV treatment packages such as CD4 count, viral load and opportunistic infections prophylaxis (27). Recently HIV testing and counselling service was undertaken with a minimum cost for the general population. But for MARPs, including female sex workers provided for free with other targeting services, like family planning and under five children (17).

After introduction of free ART in 2005, the number of people who utilized ART, dramatically increased in Ethiopia. At the same time, due to the access to ART, the number of people who had undergone a HIV test also significantly increased (68). Female sex workers also benefited from the free access to ART as the national report indicated that 70 % of sex workers who were found positive for HIV were linked to chronic HIV care and treatment (9) .

In spite of the free HIV treatment in Mozambique, indirect costs creates significant barriers in accessing HIV care for female sex workers. They were asked to pay a bribe for accessing services including ART treatment and if unable to do that would result even complete denial of the services (69). From my personal experience, in Ethiopia, health providers don't received bribe from patients. But in hospitals, sometimes patients provide informal payment for watchman, if they refuse to pay they will be denied to enter in the hospital. This could be applied to patients or any clients who are seeking services including HIV services by sex workers and could hinder the uptake services.

3.4.4 Acceptability

The service provision and expectations determines sex workers to use HIV services. Poor attitude of health care professionals for sex workers is described as one of the health service barriers to use HIV testing and counselling at public health facilities in Ethiopia as reported on the national record (32). Additionally sex workers commented that they have been stigmatized by service providers that negatively affect the use HIV testing services (56).

A study in Mozambique indicated that HIV and STIs service provision, for female sex workers by public facilities, were not accepted by sex workers. For instance, female sex workers received a bad reception and were openly stigmatized if recognized as sex workers from female health care providers due to they consider them as stealing from their husbands. Furthermore, a shortage of drugs, long waiting time, poor communication skills of providers and a short consultation were a significant barrier to sex workers to use services. On the contrary, female sex workers are satisfied with services provided by the private night clinic, since health workers provided good information and good clinical care without delay and discrimination. These in turn, motivate to use more services at the night clinic than the public facilities (69). Female sex workers in Zimbabwe experienced Public humiliation by health care providers that affected significantly their access to the HIV treatment despite that free treatment was provided in public facilities. This made them to seek treatment from private for profit organizations and other informal services that exposed them for extra cost (70). Despite detail studies lacked in Ethiopia, similar observations can be made since sex work seen as immoral and FSWs are stigmatized population group including by health providers.

3.4.5 Quality of services

According to Ethiopian health sector transformation plan, emphasis given to improve quality of health care through ensuring more accessible and equitable care for all, particularly for those highly vulnerable populations like sex workers and other MARPs

The way services delivery provided at health care facilities, determined the quality of care. Confidentiality and privacy maintain the quality of care provided in health facilities. For instance, Ethiopian study mentioned that lack of privacy at the time of HIV testing discouraged female sex

workers from taking the test since visiting HIV testing centres was considered as a confirmation of HIV positive. Additionally, it has been described that female sex workers frequently asked for confidential clinic for better accessing testing services (56). Other study also showed that HIV care and treatment for positive HIV female sex workers in Mozambique lacked privacy and confidentiality. The study confirmed that health care providers shared sex workers medical problems where it highly hindered the use of service utilizations. This issue was complained bitterly by sex workers and made them to not to visit the health facilities again (69).

Limited working time of health facilities influenced the HIV service deliveries for female sex workers at public facilities in Uganda. A study showed that the time in which health facilities operate affects sex workers in accessing HIV services as most of sex workers operating at night. Due to this working environment, they could not attend during the day to use the HIV treatment and support services, even as they come, could not wait till they receive services as delay of services experienced in facilities (71).

3.5 Need Factors

3.5.1 Perceived need of HIV services

A study in Ethiopia demonstrated that some FSWs only seek HIV services when they feel an illness. They expressed that they usually neglected HIV testing and counselling while they felt healthy. The same study, showed that other sex workers were believed in accessing the HIV services due to the risky nature of the work (56). Similar supportive evidence was found in a study conducted in Uganda. The study indicated that HIV positive female sex workers felt that the use of the HIV treatment to remain healthy and to avoid an advanced stage of HIV infection. The others had good perceived needs of quality treatment for their HIV infection in order to live a healthy life and to look after their children. Some sex workers described their believe, that taking ART would save life's as they observed from their colleagues those who didn't start the treatment, were dying while those who started were improved their life. Their positive perceived need of HIV services facilitated an uptake of HIV services by sex workers (53).

3.5.2 Evaluated need for HIV services

Evaluated needs indicates the health provider's judgment regarding the health status of people and their need for health services (33). Federal HIV/AIDS prevention and control office (HAPCO) and the MOH identified that access to HIV and other health services is restricted for female sex workers in Ethiopia. Based on this finding, a national strategy and guideline is developed to address these most at risk population groups. These initiatives at national level motivated other local and international partner organizations to work with the female sex workers HIV/STIs prevention and treatment that would help to get more access to services (4).

3.6 Health behaviour

An available study in Ethiopia indicated that in generally sex workers recognized having multiple sexual partners, inconsistency condom use and substance use like alcohol as sexual behaviours (72). Additional study in Ethiopia also showed that female sex workers bear a substantial burden of sexual transmitted infections due to engaging in unsafe sexual activities, which in turn makes them more susceptible to a HIV infection (73).

A national record indicated that female sex workers reported they knew the basics of how HIV transmits and the importance of condoms to prevent infections. However, a significant number of sex workers found that who didn't practice safer sex consistently, particularly with regular or intimate partners related to trust development. (74). This personal poor health behaviour for some

sex workers hindered the uptake of HIV testing services due to fear related to this risky behaviour and for the other sex workers having sex with intimate partners has given them false confidence that they would not get a HIV infection (56) (46). Such kind of misconceptions is believed to lead to poor HIV service utilizations.

Substance use among sex workers like high alcohol consumption is part of their business during working time. Due to such common behaviour, sex workers are considered as the most at risk population in contracting HIV and other STIs associated with it leading to unprotected sex as the result of intoxicated with alcohol (13). HIV guidelines mentioned alcohol drinking as one of the barriers in HIV treatment program since it relate to the poor adherence in treatment and in attending subsequent visits like and follow up (17). Although no related study was found in Ethiopia regarding the effect of alcohol on the HIV treatment in sex workers, a study conducted among sex workers in Uganda clearly indicated that the use of alcohol was associated with a poor adherence as it limited their ability to recall taking the ART drugs and to attend the appointment in the facility (75). This in turn, affects their regular follow up of HIV care and support at the health facility.

Use of other health services by female sex workers in Ethiopia contributed to having HIV services at the same times. A National study has shown that sex workers who utilized maternal health services like antenatal care (ANC), also offered and tested for HIV as HIV testing was integrated with MNCH services (76).

Chapter 4: Best intervention/experience in other countries

In this section effective interventions targeting sex worker in Ethiopia and other countries with similar patterns like Ethiopia to be present in order to make recommendations. During the selection of interventions, the potential to effectively address the identified barriers from the finding and its feasibility to implement in Ethiopia are considered.

4.1 TransACTION prevention intervention-Ethiopia

The five years TransAction prevention intervention project from 2009-2013 was implemented by save the children and other international and local partners to expand the access to HIV/STI prevention, care and support for MARPs with major transportation corridors of 120 towns (30). Female sex workers were the main target group of the projects since the project base line survey identified that the uptake of HTC and STIs were quite low among these MARPs group, since there were no services targeted female sex workers before the TransACTION program(42). The project was focused on behavioural and biomedical interventions and services were provided through for-profit and non-profit private health facilities within the health care network in order to access the quality of HIV testing and counselling and STIs provisions services. Payment was provided for the private facilities who are working for profit for the services they provided. These facilities got recognition by sex workers and the community because of that the project provided them technical and material supports. As result, the numbers of sex workers, using private facilities, increased and at the time their business income also increased (30).

According to the project evaluation, the uptake of HTC and STI among female sex workers increased since the project actively involved them in peer education and improved access to clinical services. The number of sex workers who had STIs checkups increased from 14.5 % at baseline to 66.7% at the end line. Similarly, utilization of HTC was increased from 44.8 % at base line to 86.7 to end line (30).

4.2 Access to ART result viral suppression in Malawi

The primary goal of antiretroviral drugs are ultimately the reduction of viral load(77). One of the UNAIDS ambitions of HIV treatment target was, achieving of 90 % viral suppression among those who start treatment (78). A descriptive, cross-sectional study among 200 FSWs in Malawi focused on integrated HIV testing in ANC clinic for all pregnant and lactating mothers, contributing to an improved access to the HIV test for sex workers as well. This opportunity facilitated the uptake of ART for HIV infected sex workers; the study indicated a good improvement in terms of viral suppression among sex workers who started the treatment. Close to half of sex workers, among those who started ART, reached optimal viral suppression. As a result, the viral suppression, among these highly vulnerable groups, improved their quality of life and contributed significantly to a reduction in HIV transmission. The study also added that, the sexual and reproductive health promotion programs for sex workers, which were implemented by the NGO, helped them to utilize HTC services that led them for ART linkage (79). Another study showed that this NGO provided services targeted for sex workers and an emphasized importance of HIV testing in order to improve the ART coverage for FSWs (80).

4.3 Integrated stigma mitigation intervention–Senegal

A 24-month longitudinal cohort study where 758 FSWs participated, demonstrated that a combination of stigma interventions improved the delivery of HIV services and increased the uptake of these services by female sex workers at public facilities, in Senegal. The study was conducted by the Johns Hopkins University and the MOH-Senegal with other national and international partners. At the base line, low utilization of HIV services, both in prevention and treatment, among sex workers, was identified due to stigma from health care facilities (81).

Integrated stigma reduction intervention was designed targeting health care workers and the community to address the identified barrier. The interventions were community and clinical interventions. The community interventions consisted of 750 female sex workers and education about HIV and related topics in 5 modules and was provided by peer educators every 3 months. The clinical intervention was aimed at health professionals and training was provided to improve service provision for FSWs and other key populations. The implementation outcome has been effective in reducing stigma at health facilities. For instance, over 6 months the cohort participants described stigma at the health facilities were significantly reduced. Around 81.6% of FSWs who participated in the community intervention expressed that the education program supported them to cope with stigma (81).

4.4 Innovative activity to access STI services at Drop in centers-India

To increase the uptake of services, studies recommend, sex workers targeted intervention, such as Drop in centres (DIC) where sex workers get physical space, come together and form unions that creates opportunity to discuss about their health and use HIV and STI services. Despite the availability of such services, sex workers may not be motivated to come the centres. The introduction of innovative ideas, that started sessions on beauty and health care by a trained beautician, contributed to attract young sex workers in the DIC, in Bangalore, south India, since young FSWs utilize less HIV services due to stigma and less awareness of services. A beauty course, regarding how to dress and looking good within a cost-effective way was organized for FSWs in DIC with minimum cost. The training was offered for young FSWs in DIC by a professional beauty trainer, hired by the project working on FSWs. Additionally these sex workers were also provided beauty services. This created a good opportunity to provide STIs, condom demonstration and counselling services at the same times. As result a number of and frequency of sex workers who utilized STIs services and other health services increased. For instance, the study showed that 25 young FSWs were using DIC every week and were able to form a young FSWs network to facilitate in accessing STI services for other sex workers in the community (82).

Lessons learned from Ethiopian and other countries demonstrated that there is an importance of targeted sex workers interventions, to increases the uptake of services. In addition, it indicates that no single intervention alone is effective, but rather a combined prevention and treatment, as learned from Ethiopia and Malawi, are most effective. Lessens from Senegal indicated a need for Integrated intervention that targeted on barriers of service utilization, could help to facilitate the uptake of HIV services. Finally, the Indian intervention provided the consideration for additional creative activities in projects working with female sex workers to attract FSWs for HIV services utilizations specifically for those hard to reach sex workers like young FSWs.

Chapter 5: Discussion

Overall, this study responded to the identified problem stated in the problem statement; the low uptake of HIV related services by female sex workers in Ethiopia. According to the selected conceptual framework, findings from a literature review, that included environmental factors, predisposing factors, enabling factors and need factors are discussed below.

5.1 Environmental factors

The HIV service uptake is significantly affected by the legal context of the Ethiopian constitution on sex workers. The law prevents practicing commercial sex work activities, but does not prohibit the practice as it operates throughout the country. This absence of prohibition seems to enable the FSWs to work with relative freedom. However, this relaxed law enforcement of criminalization does not support to have legal protection for sex workers. Rather the illegal declaration of sex work created a poor commitment to implement a legal protection, despite it was noted and strongly recommended by the national's partners.

Ethiopian national guidelines clearly identify that female sex workers are in need of targeted interventions that enable them to use HIV services. But without legal protection, the uptake of HIV service would not be successful. This lack of legal support for sex workers may result in violence, stigma and discrimination that in turn affects accessing the HIV prevention and treatment services.

Ethiopia has shown a commitment for the right of women by signing UN declaration, that would serve as a good opportunity to develop a non-discriminatory law or regulations for sex workers, to exercise their rights in respect to legal coverage and accessing HIV related services without stigma and discriminations. Beyond mentioning a strategic plan and prioritized sex workers for national targeted HIV intervention, progress to implement a practical regulation on the legal protection of these marginalized sub population, still remains low. This shows that a gap in full commitment among those policy makers and other authorized body to put in practice the UN signed agreement. Besides, it indicates further revision of the agreement and incorporates with existing HIV guidelines. If legal protection were in place, barriers related to a legal context such as violence, stigma and discrimination would have been reduced. This in turn, would have improved uptake of HIV services that result in prevention of new HIV infections and treatment, care and support for sex workers.

5.2 Predisposing factors

Stigma, gender based violence and fear of positive result finding were mentioned as the most important emerged factors that prevent uptake of HIV services by sex workers. Stigma has been a known hindering factor for accessing HIV treatment and care among the general population in Ethiopia. This stigma is also affecting the sex workers service utilization in the same way. But stigma surrounding sex workers is a double stigma that is attached to their profession and HIV. The stigma linked with sex work in Ethiopia could be explained by the presence of discriminatory laws that allows the public to have negative attitude and can humiliate sex workers. Such kinds of public views further influence the access and utilization of HIV related services by sex workers, despite the HIV testing and HIV treatment are accessible for free.

Frequent change of sex worker place, mentioned in Ethiopia, as barrier to accessing HIV services that was related with stigma. However, such mobility may not be linked only with stigma. It could be due to access a better business and new clients that would support the sex workers to earn more income. Whatever the reason behind, the mobility of sex workers is identified as a hindering factor for uptake of HIV services by sex workers. It also shows absent of policies to address the health need of these mobile sex workers. Specific policy related to access to HIV and other related services for mobile sex workers needs to be in place.

Fear of a positive result has been known as a main barrier for the low uptake of HTC, which is a very important step for entry of HIV care and treatment. Such fears are not only limited to FSWs

only but also for the general population. However, behaviour such as multiple sexual partners, low condom use particularly with intimate partners and poor existing services targeted sex workers, may aggravate the fear of positive result more than the general population. This could be the explanation since in this study, in Ethiopia and Zambia, the fear of a HIV positive result was mentioned as the main reason to not utilize HTC. It seem that the targeted intervention for sex workers, to include the increase of HIV status awareness with emphasis on, the benefit of knowing one's status, needs to be considered to increase the uptake of HTC in FSWs.

Generally, female sex workers in Ethiopia, experienced different forms of gender based violence, related to their profession, personal and gender that limited to the use of HIV and other related services.

There is a limitation to find studies that show the link between violence and the effect of the HIV service uptake in Ethiopia. But violence against sex workers in Cameroon negatively affected the access of HIV prevention and health care services, that could compromise their ability to engage in health care. It is believed that violence in Ethiopia could also affect the use of HIV services in sex workers, since they are commonly exposed to physical and sexual violence. In addition, the absence of a law that protects the health and the wellbeing of sex workers, makes it more difficult to access services like PEP for HIV and STIs during sexual violence, like rape, because they could not report violent perpetrators and seeking legal assistance after sexual assault due to stigma related to their work. This indicates an urgent need for legal support and development of a policy to prevent for violence against sex workers, that would help them to control their health, safety and improve accessing preventive and treatment services.

5.3 Enabling factors

This literature review study, also identified certain health service related barriers attributing for the uptake of HIV services by sex workers including: distance to the facility, indirect cost, stigma by health professionals, cruel judgmental and disrespectful attitude of health workers, lack of confidentiality and privacy, and inconvenient opening hours.

Availability of targeted services for FSWs in Ethiopia and Kenya led sex workers to access HIV and STIs services. In both countries, a peer mediated program played a key role in increment of the number of sex workers who utilized the HIV and STIs services. The other important review noted in both countries is that female sex workers targeted interventions were run by NGOs. This indicates a gap from the government side in the active involvement of sex workers related programs, that could affect sustainability of services as observed from Ethiopian experience, in which when the NGOs phased out, targeted services for sex workers also stopped. This demonstrated that a considerable government commitment and participation as implementer is required to sustain programs that support the uptake of services by FSWs. Furthermore, international partners, who are working in sex workers projects should target sustainability and consider empowering local public facilities for availability and accessibility of HIV related services without the interruption for these most at risk population groups.

Geographical accessibility health facilities close to the sex workers residence is described as a facilitator for accessing HIV testing and linkage to HIV care in Ethiopia and Uganda respectively due to less time- consuming and not demanding transport costs. From another point of view, sex workers in Ethiopia reported that they prefer HIV services from distant health facilities due to the fear of recognition and subsequent stigma. This could be explained by the fact that at the distant facilities it is less likely to be seen and recognized by their close friends, family members, and the nearby community.

Female sex workers received HIV related services freely in Ethiopia including HIV testing and counselling. ART treatment including CD4 and viral load count and some opportunistic infections

treatment. But providing free services doesn't avoid the indirect cost associated with HIV treatment and care services, as observed in Mozambique where sex workers were asked for bribes. Sex workers in Ethiopia may be exposed to similar problems and other indirect costs associated with a transportation fee, since one of the findings of this study shows that the FSWs prefer to seek HIV services from distant facilities due to stigma. This in turn, affected by the low economic status of FSWs as stated in chapter three of this study.

The findings regarding the health professionals' stigma against sex workers in Ethiopia, was consistent with other African countries like Mozambique and Zimbabwe. Factors appeared that prevented the uptake of HIV prevention, treatment and care by FSWs, the most important of which mentioned was stigma by health care providers. Such kinds of unwelcoming behaviour were not accepted by sex workers in all mentioned three countries. These problems were observed in public health facilities, that resulted in failure to attend HIV related services. This finding clearly shows that lack of knowledge and misconceptions regarding female sex workers exist in health care providers that are believed to be a potential hindering factor for accessing HIV and other related services. This may be related to the lack of experience in working with sex workers and it indicates that the need for the training of health care workers on the awareness of female sex workers' health care need and right to access services. In addition, the national MOH, and other stakeholders, like HAPCO in Ethiopia need to enforce other influential government bodies like law makers for the sex workers' health care rights and access.

The other findings from this study confirm the lack of confidentiality, privacy and poor flexibility of opening times that compromised the quality of HIV services for FSWs, that resulted in avoidance of utilization of the health facility. There is no study found in Ethiopia regarding limited working time but the finding from Uganda indicated that inconvenient time of public facilities hindered HIV service utilization since sex workers operate during the night time. This can apply to the Ethiopian setting as well, as health care activities operate during the day times which is difficult to access for FSWs because it is their rest time, since the majority of them works at night. This is an indication to consider night shift services, targeting sex workers by the government and other developmental partners in Ethiopia, to increase the uptake of HIV related services. Such night services proved to be effective, as shown in Mozambique which can be used as a good role model that positive comments were made by sex workers since the clinic provided services with convenient time and less probability to be recognized by other people, that minimize the chance of stigma.

5.4 Need factors

The high perceived need of HIV services in FSWs, that motivated to take HTC, could be related to the national attention on HIV prevention on MARPs and the availability of peer education programs and awareness of HIV by local and NGOs. Such programs are known to increase the perceived sense of being at risk of contracting HIV that leads to seeking HIV test places. On the other hand, the finding shows that the need to consider the expanding of health education and awareness programs to sex workers, for those who perceive need of HIV testing, only during illness. The finding from Uganda would be a good example, that availability of sex workers support groups can motivate sex workers to utilize HIV treatment and care.

5.5 Health behaviour

Misconceptions and substance use in female sex workers are associated with a poor adherence to care and reluctance to use services that require interventions like counselling, which is focused on corrected misconceptions, substances use and treatment services for substance using FSWs. Governmental and local NGOs counselling centres could be strengthened to provide these services to the FSWs population group, since a high number of FSWs reported to use substances. These barriers need to be addressed to facilitate access to HIV care and treatment services in FSWs.

5.6 Best interventions/experiences in other countries

This literature review examined best practices from Ethiopia and other similar countries that have demonstrated successful interventions, that allowed the improvement in the uptake of HIV services by sex workers. The Ethiopian TransACTION project addressed the problem of geographical accessibility by providing outreach services targeting sex workers. Peer education and strong linkage contributed to an increase in uptake of HIV and STIs services in sex workers. In addition, availability of clinical services, by building the capacity of health facilities with necessary resources, such as HIV test kit and STI treatment, helped sex workers to access services. Based on the information from the study, the project ended with a five years period intervention. Involvement of private sectors and linking services have shown to increase the uptake of HIV and STIs services through addressee gaps in accessibility of services that could provide additional options to use services. This indicates that such kinds of supportive services should continue for these marginalized population group and government need to take the lead so as to sustain the services. The evaluation study used both methodologies, quantitative and qualitative, that gave strong evidence.

Evidence from Malawi suggests that sex workers could response well to ART treatment as the general populations given that service is available and integrated. Most of the study found in Ethiopia, regarding uptake of HIV services by sex workers are related to HTC and STIs. However, lack of study noted on the access and utilization of ART treatment except the national report stated that 70 % HIV positive FSWs are linked to HIV care. But no further information about ART coverage, their adherence and treatment responses, this may be hampered by poor legal support that resulted in the double stigma surrounding HIV and sex work. Similar to Malawi, HIV testing integrated with other services, like ANC and family planning (FP) in Ethiopia that was mentioned as contributing factor for sex workers linkage to ART in Malawi.

If appropriate intervention and attention is given, public health facilities could responded well for need of FSWs in HIV related services. The Senegal promising integrated intervention reduced stigma, that was identified as a main barrier for the uptake HIV prevention and treatment services in Ethiopia as well. Most of female sex workers interventions conducted in Ethiopia by partners' organizations and are usually not seen implemented at public facilities. When their project periods ends, the service also stops that made it difficult for the continuity of HIV services for FSWs. Intervention targeting public facilities, not only improved the uptake of services but also contributed immensely to sustainability of the program. Public services are the major HIV service providers including the FSWs in Ethiopia. The Senegal experience could be adapted to Ethiopia, that integrated interventions are better than a rather single intervention to avert barriers identified as the cause of the low uptake of HIV services for sex workers. The established national training centres in Ethiopia, for health care workers, could be a good opportunity for providing training that is targeting the competency of health workers to address the need of FSWs related to HIV and avert the health workers stigma for these marginalized populations groups. The existing national sex workers peer educations programs need to include coping mechanisms of stigma, since most of them focused on reducing risk and condom use. Given the current situation, the legal support might not be implemented within a short period of time. However, the training for health professionals at a different level of HIV service deliveries is feasible in order to avert health providers stigma and discrimination of FSWs. The Senegal cohort study was conducted through convenience sampling and the lost follow up was reported that could limit for the generalizability.

Innovative approach, incorporated with HIV and STI services, were found to be effective in increasing the uptake of services by sex workers as shown from Indian experience, that could apply to the Ethiopian setting as well. Despite availability of services sometimes sex workers may not have an interest to participate in HIV related services due to low risk perceptions and poor perceived health seeking behaviours, which is identified as a gap in this study. If some skill based

training in accordance with sex workers interest start and integrated with HIV and other related services, uptake of services would be improve. But it needs further assessment on kinds of training suitable for sex workers and availability of additional funds for such activities.

The adapted Anderson framework, used in this study is easy to use and helps to explore and analyses factors influencing the use of HIV services by female sex workers and to explore effective experiences to recommend and apply in Ethiopian setting. But lacked to get some studies conducted in Ethiopia particularly related to ART treatment among FSWs.

Chapter 6: Conclusion and Recommendations

6.1 Conclusion

Over all this study revealed important hindering and facilitating factors affecting HIV related services among female sex workers in Ethiopia. This study showed that a lack of legal support, stigma, Gender based violence, and fear of positive result, lack of confidentiality and privacy at health facilities, and health workers stigma were the main barriers to access HIV related services by sex workers.

Stigma and gender based violence, exacerbated by the lack of legal support, made FSW's the most marginalized group in Ethiopia. The oppression they face as sex workers and being HIV positive exposed them to double stigma. Stigmatization on the other hand, fuels violence and this in turn, further aggravated their lack of access to HIV testing and antiretroviral therapy related services.

Ethiopian commitment of targeted HIV interventions and reduction of HIV infection among sex workers would be ineffective, unless barriers to HIV and other services are tackled particularly stigma and discriminations. Empowerment of sex workers with the development of policy, strategies and guidelines, considering the female sex workers' legal protection and support would have a positive impact in increasing the access to and use of HIV services. Provision of HIV services that ensure the well being of sex workers need to be prioritized.

Health facilities have been recognized as the most significant barriers to negatively affect the access to and utilized HIV services among female sex workers. Health workers stigma and discriminations against sex workers are identified as the most common practice, that needs critical attention and has to be address without delay. Great attention should be paid for maintaining confidentiality and privacy while providing services for sex workers, since the uptake of HIV services is strongly negatively affected. Considering the opening time of health facilities, which is convenient for sex workers, is potentially the most single crucial step that could be seen as a take home message for the MOH-Ethiopia and other partners working with the female sex workers projects in order to ensure access to HIV prevention and treatment services.

The other point could be drawn from this study, is regarding best interventions that have been used to the increased uptake of HIV services among sex workers. Services availability, close to sex workers, place and provision of integrated interventions on identified barriers to use services, contributed to address the low uptake of HIV services by sex workers. To increase the service uptake, not only prevention services work but also treatment services work and respond well to sex workers. In addition, looking for innovative ideas, to attract sex workers to HIV service uptake, has been proven to be effective, particularly when sex workers show low interest for available services.

6.2 Recommendations

According to the finding of this study, the following recommendations made to increase the HIV services uptake by female sex workers in Ethiopia. The recommendations are provided based on the role and responsibility of stakeholders involved in HIV related programs and implementations.

6.2.1 Recommendation for policy makers (Government, MOH, HAPCO, NGOs)

- Law and regulation that protects sex workers from violence and stigma should be in place based on the Ethiopian accepted UN declaration of human rights and women rights. Policy and Strategies should be developed by the MOH-Ethiopia and HAPCO and advocate to public and private organizations particularly who are working in sex workers projects with a big attention for the health sector, and to the general public.
- MOH-Ethiopia should revise the national HIV policy and considers the inclusion of policy directions to safeguard the sex workers' rights to access HIV and other related services.
- All funds targeted for female sex workers should be spent properly for desired purpose only and MOH-Ethiopia should monitor and evaluate the activities with respect to the financial investment
- Clinics with a considered convenient time for female sex workers in order to access HIV prevention and treatment services, should be established by MOH Ethiopia and other development partners as it contributes to safe, and effective service utilizations
- MOH-Ethiopia and HAPCO should develop strategies, to sensitize a health professional, specially in public facilities, to provide FSWs friendly services without stigma and discriminations through conducting trainings and work shop
- NGOs and other partners who are working with female sex workers should consider sustainability of services during planning and implementation, with involving the government body like MOH to ensure a continuous uptake of HIV services in absence of NGOs
- Out-reach peer mediated services should be strengthened provided by NGOs like PSI-Ethiopia and need to be expanded with comprehensive services to cover more sex workers. They should also consider empowering government facilities by providing trainings to provide female sex workers with friendly services to increase uptake of HIV services by public facilities.

6.2.2 Recommendation for regional and district manager

- Regional directors should ensure that confidentiality and privacy is maintained at the point of HIV health services deliveries with a priority given for female sex workers and others MARPs through conducting supportive supervisions and mentoring.
- District managers should organized on the job trainings for health professionals who are working in HIV and other related trainings, regarding averting stigma and discriminations during provide services for sex workers

6.2.3 Recommendations for further study

- HIV treatment status and coverage and outcome in Ethiopia needs further study, since it can contribute to known additional influencing factors in service uptake by sex workers.

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