Factors influencing utilization of HIV Prevention and Treatment Services by Female Sex Workers in South Africa:
A Literature review

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Factors influencing utilization of HIV Prevention and Treatment Services by Female Sex Workers in South Africa: A Literature Review

A thesis submitted in partial fulfilment of the requirement for the degree of

Master of Science in Public Health

By

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Zimbabwe

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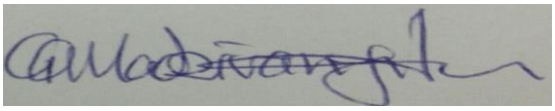

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ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ART	Anti-Retroviral Therapy
CSO	Civil Society Organisation
CSW	Creative Space Workshop
CBHTC	Community-based HIV Testing and Counselling
CBHTC+	Community-based HIV Testing and Counselling Plus
DHA	Department of Home Affairs
DSD	Department of Social Development
FSW	Female Sex Worker
GBV	Gender Based Violence
HCT	HIV Counselling and Testing
HCW	Health Care Worker
HIV	Human Immunodeficiency Virus
HTA	High Transmission Area
HTS	HIV Testing Services
IAC	International AIDS Conference
KP	Key Population
LDTD	Long Distance Truck Drivers
LGBTI	Lesbian, Gay, Bisexual, Transgender and Intersexual
MSM	Men who have Sex with Men
NACOSA	Networking HIV/AIDS Community of South Africa
NDoH	National Department of Health
NGOs	Non-Governmental Organisations
NSP	National Strategic Plan
PEPFAR	United States President's Emergency Plan for AIDS Relief
PEP	Post Exposure Prophylaxis
PLWH	People Living with HIV
PSS	Psycho-social support
PrEP	Pre-Exposure Prophylaxis
PSE	Population Size Estimates
SA	South Africa
SANAC	South African National AIDS Council
SRH	Sexual Reproductive Health
STI	Sexually Transmitted Infection
STTR	Seek, test, treat and retain
SWEAT	Sex Worker Education and Advocacy Taskforce
SW	Sex Worker
TAP	Treatment and Prevention

TasP	Treatment as Prevention
TB	Tuberculosis
TCC	Thuthuzela Care Centre
T&T	Test and Treat
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNDP	United Nations Development Program
UTT	Universal Test and Treat
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation

GLOSSARY

Access -refers to an opportunity to get proper health care services in circumstances where care is a perceived need (Levesque et al, 2013).

Evidence-informed interventions
Evidence-informed initiatives with implementation focussing on the attainment of well-planned objectives and targets (SANAC, 2016)..

HIV prevention refers to activities or strategies done by an individual, group, communities or health facilities to prevent HIV transmission. (NSWP, 2016-2020).

Health seeking is action or inaction when a person thinks he or she has a health challenge that needs treatment (Latunji & Akinyemi 2018)

Key Populations populations at huge risk of acquiring HIV or transmitting to the other person (SA National SW HIV Plan, 2016).

Men who have sex with men (MSM) refers to males who have sex with males regardless of whether they have sex with women or have a personal or social gay or bisexual identity. This concept is inclusive of men who self-identify as heterosexual but have sex with other men (NSWP, 2016-2020).

Post-exposure prophylaxis (PEP) refers to antiretroviral medicines that are taken after exposure or possible exposure to HIV. The exposure may be occupational, as in a needle stick injury, or non-occupational, as in unprotected sex with a partner with HIV infection. The latter is sometimes referred to as N-PEP.(Scheibe et al, 2011)

Pre-Exposure Prophylaxis (PreP) refers to antiretroviral medicines that are prescribed before exposure or possible exposure to HIV as a preventative measure (NSWP, 2016-2020).

Sex work refers to a situation whereby two adults who are over 18 years of age consent to have sex for cash, services or kind on a regular or occasional basis and it can either be formal or informal (Scheibe et al,2011).

Sex Worker refers to a consenting adult (18 years or older) male, female, transgendered person who works in different settings with the primary intention of exchanging money for sex (NSWP,2016-2020) as a source of livelihood, with the terms negotiated by sex workers and with the choice to accept or reject the transaction (SWEAT strategy development process, 2015). In this study, self-identified adult female (Female Sex Workers-FSW) who operate in various settings were included.

Transgender refers to a person with a gender identity that is different from his or her sex at birth; they may be male to female or female to male. They may also prefer not to conform to any gender binary or to rather use gender-neutral references (NSWP, 2016-2020).

Treatment as Prevention (TaSP) -this is whereby HIV-positive people receive antiretroviral treatment so that there are less chances of passing on the virus to their partners who are HIV-negative (Lane, 2015).

Treatment Cascades

The HIV treatment cascade—also referred to as the HIV care continuum—is a system to monitor the number of individuals living with HIV who are actually receiving medical care and the treatment they need. It was developed to recognize the various steps necessary for everyone who needs HIV care to remain engaged in it—from an initial stage of getting tested for HIV to being able to suppress the virus through treatment (GMT Initiative, 2013)

Utilization: the quantity of health care services used.
(www.who.int/healthinfo/systems/WHO_MBHSS_2010_section1_web.pdf)

ABSTRACT

Background: Female sex workers in South Africa bear a disproportionate burden of HIV and have the highest HIV prevalence due to poor diagnosis of HIV infection, treatment initiation and linkage to care.

Objective: To analyse factors influencing utilization of HIV prevention and treatment services by female sex workers in order to provide recommendations on evidence-based strategies to improve utilization and strengthen the interventions at multiple levels.

Method: A literature review and desk study on factors influencing use of HIV services by female sex workers was done. A conceptual framework adapted from Kaufman et al's health behaviour change models for HIV prevention and AIDS care was used to analyse the findings.

Findings: Utilization of HIV prevention and treatment services by female sex workers is influenced by a combination of several issues including lack of knowledge about the importance of treatment. Furthermore, there is no legal support, and regulations are against sex work.

Conclusion: Female sex workers in South Africa have limited utilization of HIV prevention and treatment services. To improve on utilization, the identified influencing factors need to be addressed with urgency particularly at individual, interpersonal, community, health system and structural level. These need serious consideration when designing and implementing targeted interventions for female sex workers.

Recommendations: Government, Department of health, and other stakeholders should formulate policies in favour of sex work to reduce stigmatisation and decriminalisation. Department of health should conduct sensitisation workshops for stakeholders and competence training.

Key words: South Africa, female sex workers, HIV testing, PrEP, ART

Word Count: 13177

INTRODUCTION

I am a Programme Manager for the sex worker programme for an NGO in South Africa funded by NACOSA through Global Fund. I have been working in this programme for four years and l have engaged with the sex workers and LGBTI. Before that l worked for the Private Sector for 7 years where l was responsible for the Employee wellness department as well as managing the community development programmes under the corporate social responsibility scheme of the organisation. While working there, l had the opportunity to work with the Orphans and vulnerable children (OVCs), young women and girls (YWGs) and the marginalised population which included the LGBTI, sex workers, miners, migrants and truck drivers. During that 11 year period l was able to attend various training for instance on human rights for key populations, HIV prevention programmes for key populations, IACT, and many workshops and conferences.

Female sex workers are highly overburdened by the scourge of HIV than any other population due to the nature of their jobs. Globally, there are greater chances that 13.5% female sex workers are likely to be infected with HIV as compared to the other group of women in the child-bearing age (WHO,2019). Evidence suggests that HIV prevalence for sex workers is higher than that of the general population 12 times (UNAIDS, 2014). South Africa which has a generalised HIV epidemiology is not exceptional when it comes to the issues affecting female sex workers. When female sex workers get HIV tests there are a lot of losses when it comes to initiation, treatment, linkage to care and retention to care. Hence a combination of barriers to utilisation of such services needs to be addressed if South Africa is to meet the United Nations Joint Programme on HIV/AIDS 90-90-90 targets (Scheibe et al,2016).

This Master's degree provided me with a chance to work and invest my energy in the area that l am totally passionate about. I chose this topic because my experience working with sex workers made me realise that we need to stop being judgemental and join hands in responding to HIV. Some of us provide health services to sex workers, some people among us know a sex worker. Wives, mothers, sisters, aunts, cousins, daughters and nieces are sex workers while our husbands, fathers, uncles, brothers and sons are buying sex. Therefore, it is not a matter of choice but a matter of urgency that we work together to fight HIV by addressing the barriers to uptake of HIV prevention services by female sex workers because HIV/AIDS affects everyone.

1.0 CHAPTER ONE: BACKGROUND

In this chapter, an overview of South Africa in terms of geography, demography, governance and politics, economy, socio-cultural situation and health system will be given

Country Profile

1.1 Geographic and Demographic Profile

South Africa is located on the Southern part of Africa with 1219,602 square kilometres as surface area sharing boundaries with Botswana, Zimbabwe, Namibia, Mozambique, Swaziland and also Lesotho which is landlocked in the south eastern part of the country (SA Government, 2015 (SA Government,2015).

Figure 1 Map of South Africa

Source -WHO, 2016

South Africa has nine provinces with a total population of 54 million and 30% of the population is below 15 years of age (Statistics South Africa, 2015, WHO, 2016). Life expectancy increased from 51.6 years in 2005 to 61.2 years mainly due to ART and various health interventions in 2014.

1.2 Economic and Socio-cultural situation

South Africa is amongst the top three middle-income countries in Africa and in 2014 it had a GDP of US$350.1 billion and US $6,483 as the GDP per capita (South Africa Data Portal). It is ranked as an upper-middle income economy by the World Bank and is considered a newly industrialised country and despite having the seventh highest per capita income in Africa,

poverty and inequality are widespread (UNAIDS, 2014). There is a lot of migration into South Africa as well as regional migration which has resulted in unemployment, racial disputes and inequity in terms of service delivery for important services for instance, health, electricity, water and waste disposal (WHO, 2016). About a quarter of the population is unemployed and lives on less than US$1.25 a day (UNAIDS, 2014). The limited access to formal tertiary-level education by black South Africans, in particular women, created a dependency on male partners for financial support and social power. Legacy of Apartheid included largely gender and racial disparities in social and economic life with black women being put at risk for various forms of exploitation (Gomez et al 2016). Furthermore, the social and economic inequalities in South Africa have placed black South African women in subordinate roles which have weakened their ability to negotiate safer sexual practices (Gomez et al, 2016). Hence due to social and economic disparities, a considerable number of black females in South Africa are involved in transactional sex (Gomez et al,2016).

1.3 Healthcare Service Delivery System

The South African health system is divided into two; the public sector (state run) and the private sector (WHO, 2015). Under the public sector, there are primary, secondary and tertiary health facilities and these are situated in and under the administration of provincial departments (WHO, 2015). Most people in South Africa receive healthcare services from the state-run health facilities which are hospitals and clinics (WHO, 2015). The private sector mostly serves the economically stable population (WHO, 2016).

1.4 Health Financing

South Africa's HIV response particularly for sex workers budget for 2013/14 higher than that of 2011 spent on HIV prevention, HIV testing and linkage to care interventions was R130.7 million (By Global Fund- R3.6 million, by PEPFAR- R23.7 million and by South Afican government. This equates to around 1.5% expenditure on ART, half the amount is for communication and behaviour change while a tenth goes to the general population for HIV testing services (SAHR,2016). See Figure 2 below for total HIV expenditure.

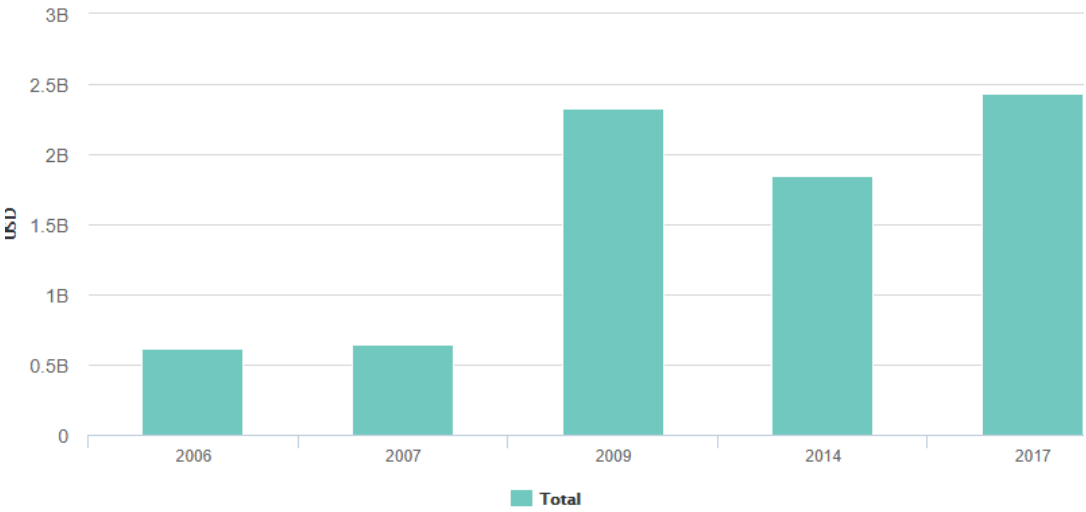

Figure 2 Total HIV expenditure

Source: Global AIDS Monitoring 2019

1.5. Health Situation

South Africa has a severe HIV epidemic that is generalised and driven mostly by heterosexual sex (Bekker et al,2015). South Africa has prioritized addressing the HIV epidemic among key populations in its current 2012-2016 HIV/AIDS National Strategic Plan (NSP), recognizing the disproportionate burden of HIV carried by each one of them. (University of California San Francisco, 2015)

1.5.1 Global and African HIV epidemic

Globally, by the end of 2017, 36.9 million people were infected with HIV. (WHO, 2017). HIV has killed 35 million since HIV/AIDS started while above 70 million have been infected. An estimated 0.8% of adults aged 15-49 years worldwide are living with HIV (WHO, 2017). Despite the decrease in HIV incidence and the increased coverage of ART HIV is disproportionately spread across populations. Africa is affected the most having nearly 1 in every 25 adults living with HIV and that is nearly two thirds people with HIV globally (Schwartz et al, 2017).In many settings the burden of HIV is unequally distributed among the key populations (Scheibe et al, 2014). These key populations (KPs) include people with higher risk for the acquisition and transmission of HIV than other adults and include Men who have sex with Men (MSM), Sex Workers (SWs), People who inject drugs (PWIDs) and transgender people (Scheibe et al, 2014). Figure 3 and 4 below shows the global incidence and prevalence of HIV.

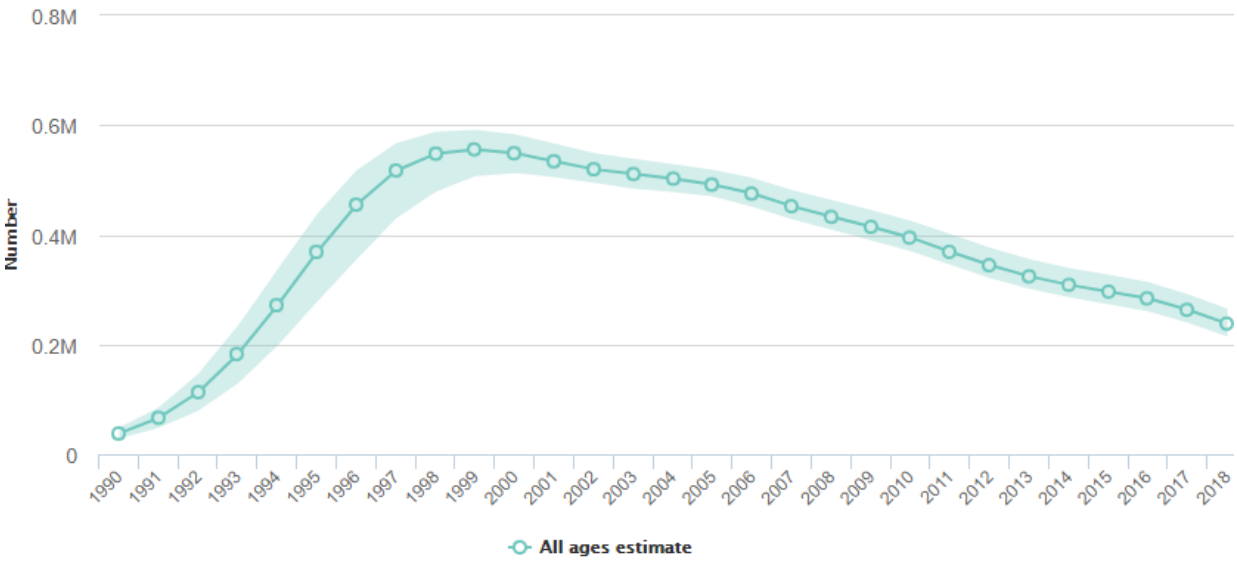

Figure 3: New HIV Infections - Global

Source: UNAIDS 2019 Estimates

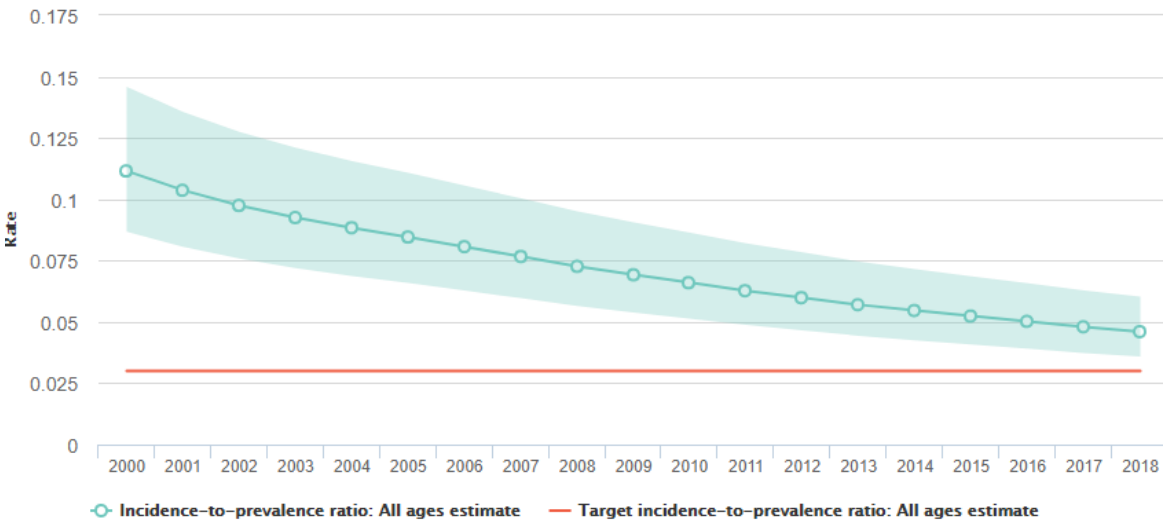

Figure 4: Global incidence: prevalence ratio

Source : UNAIDS 2019 estimates

1.5.2 Global HIV response in terms of prevention services for key populations

HIV burden and the increasing global coverage of HIV testing and treatment services key populations remain underserved (Figueroa,2015).The Global Fund strategy prioritizes investment in evidence-based programs for key populations, in removing barriers to health services and in providing support to secure meaningful engagement (Global Fund,2018). For HIV, the Global Fund is the most prominent external funder of key population programs across many regions Global Fund, 2018).

South Africa has the biggest and most high profile HIV epidemic in the world with an estimated 7.2 million people living with HIV in 2017 (Avert, 2018) that is 19% of the global number of people living with HIV, 15% of new infections and 11% of AIDS related deaths (UNAIDS,2019). The HIV/AIDS adult prevalence rate is 18.9% (SA Government, 2015). Despite all the successes, the adult HIV prevalence remains high among the general population although it varies markedly between regions (Avert, 2018).

Recent HIV key populations (KP) surveillance studies in South Africa, including female sex workers (FSW) and men who have sex with men (MSM), demonstrate the disproportionate burden of HIV they bear compared to the general population(Konstant et al., 2015). The national response for KP has lagged due to relatively scarce KP data focused narrowly on urban areas (Konstant et al., 2015).Among key populations affected by HIV in South Africa are SWs with an HIV prevalence of 57.7% (UNAIDS, 2019). In contrast, the HIV prevalence for women in the general population is 14% (Avert, 2016).

Another study that was conducted by South African Health Monitoring Survey (SAHMS) in 2013-2014 found HIV positive Female Sex Workers (FSWs) in Johannesburg being 71.8%

(95% CI 56.5-81.2), in Cape Town they were 39.7% (95% CI 30.1-49.8) and in Ethekwini they were 53.5% (95% CI 56.5-81.2) (Grasso et al, 2018). See also figure 5 for distribution of FSWs per province, urban and rural areas. The South African National AIDS Council (SANAC), conducted a research on 15-49 year old (adult female population) in 2013 and found that there were approximately 150,000 Female Sex Workers (FSWs) which almost equates to 1% of the adult female population (Konstant et al., 2015).FSWs are estimated to be 138,000 while 6000 are male and trans-female sex workers are 7000 (EHPSA,2018). In a survey conducted in Hillbrow, a place in Johannesburg South Africa, nearly half of the Sex Workers were cross border migrants (Richter et al, 2014). Two thirds of the cross border Sex Workers in Hillbrow migrated from neighbouring Zimbabwe mirroring the escalation in Zimbabwean migration to South Africa in search of improved livelihood opportunities following economic and political instability in Zimbabwe since the early 2000s (Richter et al, 2014; SWEAT,2013).

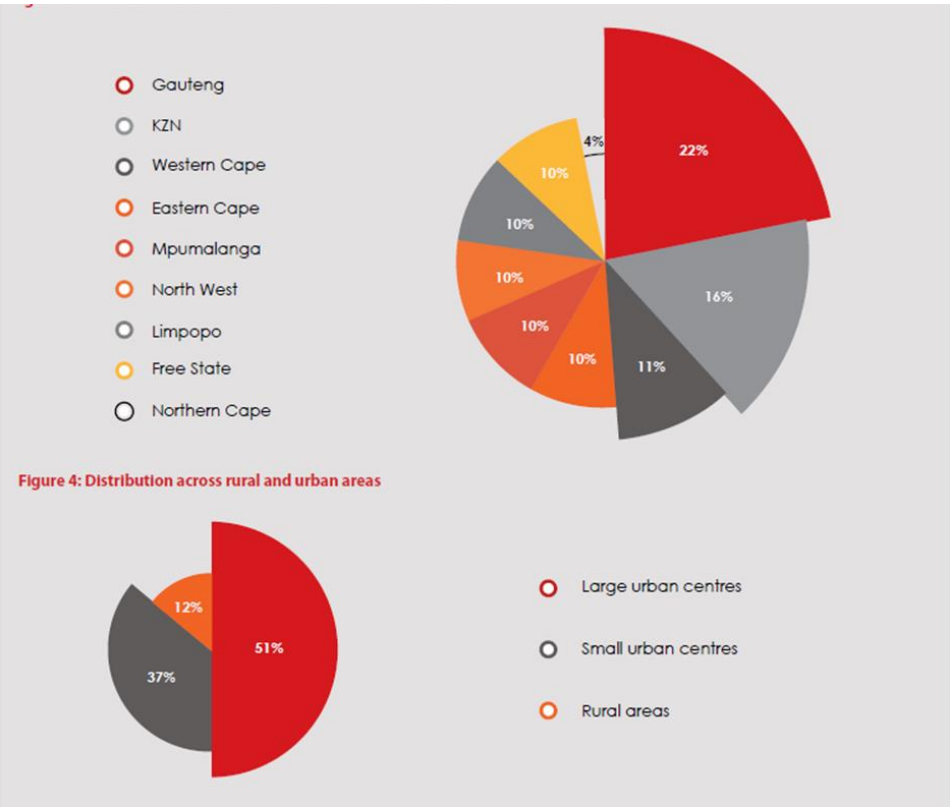

Figure 5: Provincial HIV Prevalence for Sex Workers in South Africa

Source: SANAC,2016

1.5.3 South Africa HIV response

The country has the largest anti-retroviral treatment, (ART) programme in the world and these have been largely financed from its own domestic resources (Avert, 2018).Many organisations have been formed all over the country and they have begun providing health services and they get funding from different donors. (Lane T, 2015). While HIV testing and

counselling (HCT) is common in most clinics offering services prioritised for Sex Workers, only a few service providers offer a full range of services prescribed by the National Strategic Plan (NSP) (Fobosi et al, 2017). In order to increase availability of services to SW, the South African government rolled out pre-exposure prophylaxis (PrEP) and immediate treatment called Universal Test and Treat (UTT) at dedicated Sex Worker sites that are already offering ART to Sex Workers (Fobosi et al, 2017).

The provision of PrEP and UTT was endorsed by the South African National AIDS Council (SANAC) collective decision of the government and civil society in 2015 (NSWP, 2016-2020). The sex worker interventions which are a combination prevention package includes: condoms, lubricants, STI management, screening and management of intimate partner violence, sexual and reproductive health services, and HIV services, including counselling and testing, HIV management, ART, PEP, and PrEP (SAHIVS, 2016) In 2016, the South African government launched a progressive new National Sex Worker HIV Plan, outlining a new peer-led approach to providing HIV services that had been tailored to meet the specific needs of sex workers (SANAC,2017).

Current sex worker programs connected to the public health programs will deliver the services (DOH,2016). Until then, rights and health issues of SW have not been given consideration (Scheibe et al, 2016). This has resulted in negative responses by the healthcare providers leaving sex workers unrecognised and yet they are a lot. (Scheibe et al, 2016). The 2013 SANAC study indicated that the number of sex workers varied by province **(Figure 5**).

The pace at which the health systems' building blocks are preparing to improve the health outcomes for Sex Workers has been slow (Scheibe et al,2016).On the other hand, South Africa's increasingly restrictive Immigration Act which makes it difficult for lower- skilled and job-seeking migrants to regularise their stay in the country presents additional legal challenges for non-national Sex Workers who may struggle to obtain and maintain the documents required to be in South Africa legally (Scheibe et al,2016). A range of barriers including mobility and their status as migrants impede Sex Workers' access to health care, HIV testing, retention in treatment, care and support (Scheibe et al, 2016)

2.0 CHAPTER TWO: PROBLEM STATEMENT, JUSTIFICATION, OBJECTIVES, METHODOLOGY

2.1 Statement of the problem

Problems related to HIV prevention services among key populations

Current HIV prevention efforts are not adequately targeting Key Populations where new infections are more likely to emerge (Schwartz et al, 2017). Studies in South Africa also revealed policy implementation gaps, including those around HIV Counselling and Testing (HCT), Anti-retroviral therapy (ART), and sexually transmitted Infections (STI) testing and treatment (Duvall et al, 2015). Despite donor-funded activities, high-level in-country support and strong Civil Society Organisations, a limited number of services for MSM and SWs exist. However, the study confirmed that this support diverges from the overall environment which is inextricably enmeshed with policy-related barriers to service access and sustainability (Duvall et al, 2015).

Coverage of HIV prevention services among SW

Coverage for ART in South Africa for sex workers was 23.6% while that of condoms was 86.1%in 2017 (UNAIDS, 2019). Another study found that FSWs on ART in Johannesburg were 26.9%, 23.6%, 35% in Johannesburg, Cape Town and Ethekwini (Grasso et al, 2018). According to the indicators for a programme coverage in a study that was conducted by South African Health Monitoring Survey (SAHMS), the prevention interventions had only reached a few people in addition peer educator contact with FSWs was higher in Johannesburg at 41.0% while Durban and Cape Town had 15.8% and 10.4% respectively (SAHMS,2016). Discussions about HIV issues between peer educators and FSWs, reported Cape Town, Johannesburg and Durban having 32%, 26.3% and 12.1% respectively (SAHMS,2016). Distribution of Information, education and communication materials (IEC), Condoms and lubricants among FSWs covered 77.7% ,44.6% and 28.5% in Cape Town, Johannesburg and Durban respectively. Furthermore, ART was only accessible to a few HIV positive SWs (SAHMS, 2016).

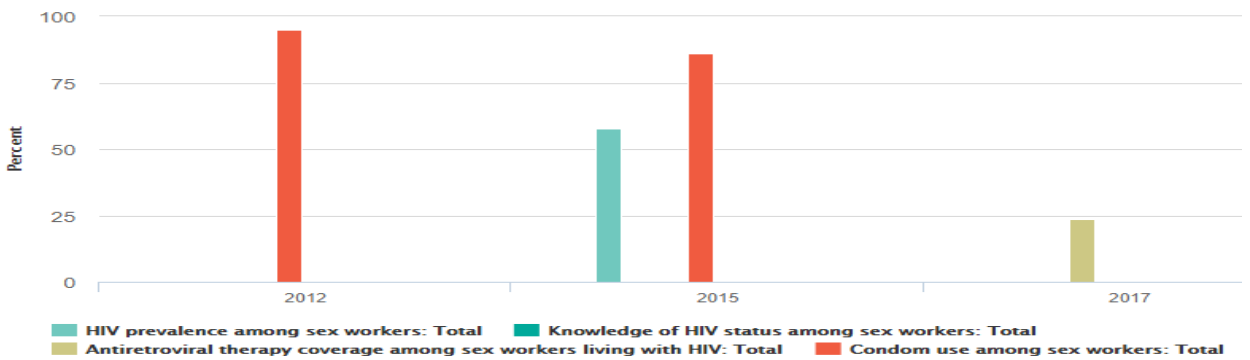

Figure 6: 90-90-90 Treatment Cascades for Sex Workers

Source: Global AIDS Monitoring 2019

Given the fact that FSWs who have either never tested or not tested recently are few, above half of the total number of FSWs are HIV positive (SAHMS,2016).This implies that sex workers who are not reached by the interventions to actively encourage utilisation of HIV testing and prevention programmes are HIV infected which from a prevention viewpoint is worrisome (SAHMS,2016).Furthermore, it is a serious concern that a year before the study 9% to 18% of HIV infected sex workers were not HIV positive and this again implies that HIV is increasing at a fast rate among the sex workers (SAHMS,2016).

Factors explaining low coverage for SW

The proportion of Sex Workers accessing comprehensive services was significantly low in all cities (Lafort et al, 2016). Sex Workers are denied access to healthcare including post-exposure prophylaxis in cases of rape (Coetzee et al, 2017). Compounding this issue is the fact that condoms are not always readily available across South Africa and stigma, exposure and humiliation prevent Sex Workers from seeking out condoms or healthcare at the health care centres (Coetzee et al, 2017). Only 5% of Sex Workers in South Africa had access to comprehensive HIV interventions in 2010 (Coetzee et al, 2017).

South Africa – issues with utilization of HIV prevention services among key populations

Punitive and criminalization laws, harassment by police and rape hinder SW from utilising HIV services putting them in unsafe and exploitative working conditions where negotiation for condom use is more difficult. Evidence has shown the interconnection between breaches in confidentiality and HCT and HIV services uptake. (Duvall et al, 2015). For SW, who are already stigmatized, fear of disclosure of their HIV status prevents them from participating in HCT and getting subsequent care and treatment. Importantly, the study found that policies to do with health finance affect services for these key populations. Unavailability of a clear policy around government funding and budgeting of SW interventions affects sustainability and availability of such services. Service availability and uptake are also impacted by policy gaps that keep SW from participating in consultative bodies and gaps in SRH policies specific to SW (Duvall et al, 2015).

2.2 Justification

In South Africa, from 2009 an improvement in treatment and prevention has been realised however, there are still gaps regarding regular HIV testing, timely HIV infection diagnosis and timely linkage to care for SWs (Lane et al, 2014). In all cities especially Durban, there is generally poor utilisation of commodities and services mainly due to low HIV services uptake (Lafort et al,2016). There was high HIV and testing and awareness of HIV status with a number of losses in cascade occurring at treatment initiation (Schwartz et al, 2016). Parallel services specifically targeting SW have been established in various places, but overall reach too few clients (Lafort et al, 2016).

A survey conducted in Hillbrow, South Africa indicated that nearly half of the SW were immigrants (Richter et al, 2014). Two thirds of the migrant SW are Zimbabweans who are fleeing economic and political instability at home in search for a better livelihood (Richter et al, 2014). In this regard, as well as my experience working with the South African Department of Health and key populations, I chose South Africa as the area of study instead of Zimbabwe because there is an influx of SW in South Africa from Zimbabwe and other SADC countries (SWEAT,2013). Hence, the study focused on SW because they have higher possibilities of unfavourable health outcomes due to the nature of their work, the stigma and violence associated with it and vulnerabilities due to socio-economic status.

Given the literature found so far there are gaps in HIV care cascade, which is timely diagnosis of HIV infection, treatment initiation and linkage to care among the FSWs. Hence, the study seeks to uncover the barriers to utilisation of HIV testing, Antiretroviral Treatment (ART), Pre-Exposure Prophylaxis (PrEP) including Adherence by Female Sex Workers. Challenges and hindrances to uptake of these services will be analysed. This will help to inform policy makers, researchers and implementers to ensure that future policies and interventions are designed to address these roadblocks by promoting timely linkage to care. Thus, treatment and care will be initiated, viral load reduced, opportunistic infections and further transmission of HIV to clients and partners reduced and treatment success optimised. This implies equitable access to HIV prevention services for FSWs, the 90-90-90 treatment cascade will be successful, the general health of the South African population will be improved by reducing HIV incidence and inequities resulting reduced absentism at work and improved economic production. Thus, the study will focus on HIV prevention and treatment services namely, HIV testing, PrEP and ART including adherence. HIV testing is important because it is the starting point and pathway to HIV care, biomedical and behavioural prevention measures (Mountain et al, 2014). Timely initiation of female sex workers on ART is advantageous for their health as well as for their partners and clients as HIV incidence will be reduced (Cohen et al, 2011).

The study sought to answer the following **research questions:** What are the factors influencing utilization of HIV Prevention and Treatment Services by and Sex Workers in South Africa? Are there any barriers or challenges in getting tested for HIV, PrEP and ART from the standpoint of the sex worker?

2.3 Overall Objective:

To analyse factors influencing utilization of HIV Prevention and Treatment Services by Sex Workers in order to provide recommendations on evidence-informed strategies to improve utilization in South Africa.

2.3.1 Specific Objectives:

- To analyse individual and community related factors influencing utilization of HIV Prevention and Treatment Services by Sex Workers.

- To analyse health system factors influencing utilization of HIV Prevention and Treatment Services by Sex Workers.
- To analyse structural factors, such as legal and policy factors, influencing utilization of HIV Prevention and Treatment Services by Sex Workers.
- To analyse global evidence-informed interventions that improve utilization of HIV Prevention and Treatment Services by Sex Workers that can be adopted by stakeholders in South Africa.
- To provide recommendations on evidence-informed interventions to Actors to improve utilization and strengthen HIV Testing Services programs for Sex Workers at multiple health system levels.

2.3 Methodology:

A literature study and desk review was done using different search engines such as Google Scholar and PubMed, Google and snowballing. Search words included MESH or other associated terms for HIV cross-referenced with MESH or other associated terms. Thus ,studies were included in the review if search terms suggested that they addressed utilization, HIV testing, PrEP, ART, and Adherence for Female Sex Workers. See research Table on Annexture 1

The following inclusion criteria were used: 1) The review considered literature published between 2010 to current. 2) This included The International AIDS Conference (2018) Abstract Book, journals, reports from NGOs, reports from WHO, reports from National AIDS Councils, Peer reviewed articles as well as other grey literature. 3)Publications were limited to studies conducted in English about South Africa, Sub-Saharan Africa, Southern Africa and other low and middle income countries on HIV prevention and treatment interventions which are HIV testing done at healthcare centres/facilities, PrEP, ART including adherence. 4).The first three objectives will consider African countries and the fourth objective will look at Low to Middle Income Countries (LMICs). Complete texts for reviews and abstracts which were not accessible were excluded. 5) Any self-identifying female sex worker (FSW) 18 years and above operating in different settings with the primary intention of exchanging money for sex as a source of living was considered. 6) All types of female sex workers were included. The following exclusion criteria was used: 1) Young female sex workers under the age of 18 were not considered because sex work does not recognise minors and they are known as victims of commercial exploitation and any sex work that involves children is a grave human rights abuse hence it is a crime (Amnesty international, 2016). were organized, uploaded and reviewed.

2.4 Conceptual model

To conduct the study, the health behaviour change model for HIV prevention and AIDS care by Kaufman et al, 2014 was used (refer to figure 6). Efforts to utilise HIV prevention and treatment services by female sex workers are undermined by various factors such as the individual's risk perception, support systems, religious and cultural stance, culturally competent health services and criminalization of the sex worker population. In this regard, this model was selected as it encompasses the individual, interpersonal or network, community, institutional or health system and structural factors. The model analysed bottlenecks from the individual female sex worker to the operation of health services and analysed constraining factors. Thus, the factors on the model will be linked to some of the objectives. The framework will help to answer the objectives. The description of the factors with reference to this thesis is as follows:

2.5 Operational definition of terms

Knowledge/information refers to understanding or facts about the interventions.

Risk perception -how a FSW interprets danger

Substance use-Taking marijuana and other types of drugs and alcohol

Self-efficacy to adhere- the belief that one can follow guidelines

Personal income/ Socio-economic status- wealth, money, living standards, educational level,

Social support -having family, friends including other people to whom one can turn to in times of need in order to give one a positive image.

Social networks-a structure of social interactions and personal relationships

Stigma- disgrace associated with a person

Community mobilization/organization- An action through which motivation comes from the community itself, groups or individuals

Service integration- HIV prevention and treatment services provided as a package.

Provision of appropriate services- Proper or well-deserved services for FSWs.

Convenient responsive services-receptive sensitive services that are provided at flexible hours.

Peer navigators/advisors- treatment adherent role models sharing similar experiences with FSWs, can identify with them and are trained to provide HIV testing and treatment services and other services up to a certain level to the FSWs.

Public policy/laws- A government entity's regulation or course of action commonly included in the constitution,

Enforcement laws-a system by which the police act in an organized way to enforce the law by stopping or punishing people who go against the rules.

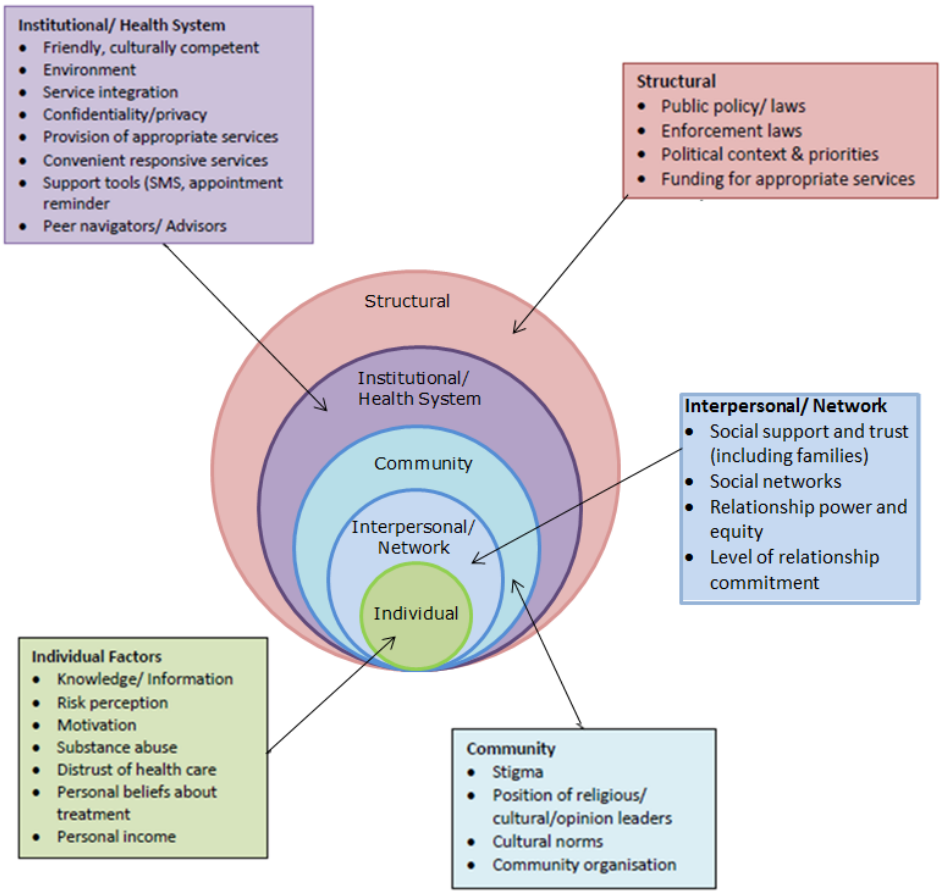

Figure 7 ***Source: Kaufman, M. R., Cornish, F., Zimmerman, R. S., & Johnson, B. T. (2014). Health behavior change models for HIV prevention and AIDS care: practical recommendations for a multi-level approach. AIDS Journal of Acquired Immune Deficiency Syndromes, 66, S250-S258.***

The conceptual Framework above has been simplified in order to focus on more important aspects which are the determinants of utilization of HIV prevention and treatment services by Female Sex Workers in South Africa (See original framework on Annexture 2.)

3.0 CHAPTER THREE: FINDINGS

This chapter will present the factors influencing HIV prevention and treatment for FSWs in South Africa. The sections in this chapter are categorized according to the factors of the Kaufman Conceptual model.

3.1. Individual and Community influences,

3.1.1-2. Knowledge/information and Risk Perception

Knowledge and risk perception have an influence on how FSW to utilize services. A review which included observational studies, random control trials, peer reviewed programme reports on three transit hubs in Zambia found that there was lack of information and the importance of HIV testing and knowing one's status among FSWs (Bekker et al, 2015). A report for a survey that was conducted by Southern Africa Health Monitoring Survey (SAHMS), found that in Johannesburg, Durban and Cape Town most of the FSWs knew about antiretroviral drugs except that 14.2% in Johannesburg, 21.2% in Cape Town and 26.6% in Durban lacked knowledge that such drugs could prevent mother to child transmission of HIV (SAHMS,2016). While engagement in mobile services was negatively associated with treatment uptake among ART-eligible women, in a comparable multivariate model assessing the association between engagement in mobile care and prior HIV diagnosis among FSWs living with HIV, engagement in mobile care was associated with a 17% increase in awareness of HIV status (PR 1.17, 95% CI 1.03 to 1.33, p=0.017)

It was the most commonly cited reason (55%). Other common reasons included those did not perceive the need for treatment (10%) and structural barriers (eg, lack of time to attend clinic, dissatisfaction with clinic care, transport costs (10%)) Schwartz et al, 2016. The majority of self-reported HIV-negative FSW in Durban (60.2%) perceive their risk for HIV infection as small; in Johannesburg and Cape Town, just under half perceive their risk as small. Less than a third of Johannesburg FSWs, less than 20% of Cape Town and Durban FSW, perceive themselves at great risk for HIV infection. However, participants acknowledged that the information provided at trial enrolment encouraged adherence and regular use of PrEP (Maria et al, 2013).

From the focus group discussions (FGDs) that were done in two clinic based settings in Johannesburg and Pretoria, knowledge about PrEP was low among the participants whereby others considered it to be a contraception before receiving a comprehensive description of it (Eakle et al. 2018). For some participants, it was through their previous experience with HIV testing and ART that they knew about PrEP (Eakle et al, 2018). study that was done in Pretoria reported participants could not make it for their appointments for ART due to their perceptions about the treatment (Wechsberg et al,2017).

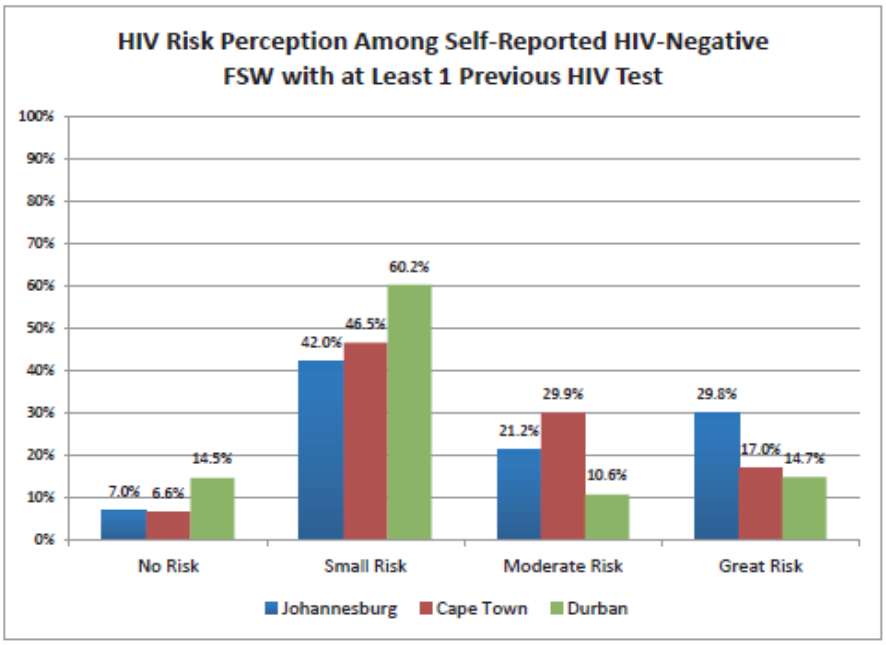

Figure 8: HIV Risk perception among FSW HIV negative at last test,

Source : FSW-IBBS 2013-2014

There are concerns regarding the side effects of PrEP (Bekker et al, 2015). Some participants expressed concern regarding risk compensation by indicating that as a result of the perceived effectiveness of New biomedical Prevention Technologies (NPTs), some FSWs would involve themselves in high risk behaviour (Rubincam et al,2018). FSWs indicated that being sexually active which implies that they were at risk of getting HIV was the main reason why they would want to take up PrEP or continue taking it. (Rubincam et al, 2018). Another study that was done in Johannesburg indicated that FSWs who perceived themselves to be at low risk of HIV infection were willing to go for HIV testing service only when they felt sick (Nnoko et al,2019).

3.1.3. Motivation

Motivation has an influence on utilisation of HIV prevention services by FSW. For instance in a randomized control trial that was done in three transit hubs in Zambia, participants reported that when a client does not want to use a condom they insist on going together with the clients for an HIV test first or just after sex without a condom for more money. FSWs go for HIV tests knowing that they have exposed themselves to HIV (Chanda et al, 2017).

In a study that was conducted in Soweto, South Africa, participants and facilitators indicated that creative space workshops (CSWs) were very important in knowledge transmission in terms of sex workers' health, rights and available support and also that their coping ability to challenges, stigmatization and sexual violence had improved (Huschke, 2019). Motivation to take up PrEP helped women by protecting them from HIV and getting rid of psychological torture they experienced. A raise in appetite for food among other beneficial reactions were

indicated as a motivation by other participants who were on daily treatment (Van der Elst et al, 2013).Participants on the daily regimen also noted an increased in appetite and libido;

> *"It was okay to me because when you go home, you feel like making love to your friend but when I stopped taking the pill, that morale faded."(Van der Elst et al, 2013).*
>
> Having been asked what motivated them to take PrEP, most of the participants indicated that it was for their health safety given the risks associated with their industry (Eakle et al, 2019).

In a study that was conducted in South Africa female sex workers' (FSWs), disbelief in PrEP and its effectiveness was the major reason for demotivation on sex workers in terms of going to the clinic or maintaining its use (Eakle et al, 2019). Another effect on motivation for PrEP use emanated from the constant questioning of PrEP being authentic by people surrounding the users (Eakle et al, 2019). Many sex workers described PrEP as a second-line defense which boosted their feeling of safety, happiness and being healthy and that they got motivated to take the pill for health protection considering the risks associated with sex work (Eakle et al, 2019). A study that was done for a TAPS demonstration project in South Africa found that FSWs expressed how beneficial PrEP was because condoms burst and sometimes clients removed them and those who are still HIV negative needed protection and personal control given the high prevalence of HIV and sexual violence in the communities (Eakle et al, 2018).

3.1.4 Substance use and denial of status

Substance use and denial of status can influence utilisation of services by FSWs. As study that was conducted in Gauteng, South Africa reported that FSWs use alcohol and marijuana and others snuff up drugs (SWEAT,2013). A similar report from a survey a South Africa stated that FSWs experience high rates of alcohol and non-medical drug use (SAHMS 2016). Participants also identified substance use as a barrier to adherence. For instance, drinking alcohol deterred participants from taking pills on time or not taking them (Maria et al, 2013).

Some participants mentioned the reason for not taking the pill was because they were unsure about the interactions of alcohol with the pill (Maria et al, 2013). The TAPS demonstration study in South Africa revealed similar results that worries around adherence included substance use (alcohol and illicit drugs) and the potential for forgetting to take a daily pill. (Eakle et al,2018)

Denial of status can deter utilisation of HIV prevention services and treatment as found by a study in Tanzania that FSWs who felt more shame and negative feelings with regard to their HIV diagnosis were significantly less likely to initiate ART.(Project SOAR, 2019)

3.1.5. Personal income/Socioeconomic status

Utilization of HIV Testing and Counselling services by SWs is influenced by socio-cultural and economic factors (Nnko et al,2019). For 236 FSWs in an international Rapid Assessment Response evaluation for three urban centres in Mozambique, going to health facilities to receive treatment was an economic risk as they had to be off sex work and that would mean loss of income (Langa et al, 2014). A randomized control study for FSWs in three transit hubs in Zambia stated that sex work is barrier to utilisation of HIV services. It was reported that sex work is a barrier to testing and other services as FSWs had to work during hours of operation for healthcare facilities or lose money by taking time going for an HIV test (Chanda et al, 2017).

A survey that was conducted in South Africa reported that no matter what type of sex work FSW do, they usually have a low socio-economic status (SWEAT,2013). Another study found that some FSWs had access to quality and costly medical care (Vaughn, 2019). Participants from a cross-sectional baseline study contacted in Pretoria, South Africa reported that they cannot go to get ART at the clinics due to lack of money for transport, identity cards, food and nowhere to store their pills (Wechsberg et al, 2017). In a baseline cross-sectional survey done among FSW in Durban in South Africa, Tete in Mozambique, Mombasa in Kenya and Mysore in India found that the sex workers had better education, mobile and young (Lafort et al, 2016). Sex work is a daily burden for many sex workers as it comes with many challenges and risks yet they have to work since they are supporting their families (Eakle et al, 2019).

Adherence has been negatively affected as a result of their work and social activities which keep them very busy while taking substances such that they usually go back home very late thereby missing on their daily treatment (Van der Elst et al,2013) Risks were associated with transmission of HIV and STIs, violence that sex workers faced as well as with clients where use of condoms was not often considered while responsibilities had to do with money, and money to look after their families. (Eakle et al, 2019). Due to the fact that participants acknowledged they were at risk of getting HIV, they wanted to stay healthy in order to be able to look after their families of which most family members do not know that they are sex workers hence they were motivated to take PrEP (Eakle et al, 2019, SWEAT, 2013). It is contradictory that some studies indicated that FSWs are from a low economic status, do not have money for transport, food or anywhere to store their treatment while another study reported that some FSWs have access to quality, costly medical care. It could be that the studies did not do triangulation for data reliability.

3.1.6. Distrust of healthcare and fear of stigma

Distrust of healthcare has an influence on utilisation of HIV services by sex workers. There are concerns regarding the side effects of PrEP (Bekker et al, 2014). Some participants expressed concern regarding risk compensation by indicating that as a result of the

perceived effectiveness of New biomedical Prevention Technologies (NPTs), some SWs would involve themselves in high risk behaviour (Rubincam et al,2018). SWs indicated that being sexually active which implies that they were at risk of getting HIV was the main reason why they would want to take up PrEP or continue taking it. Some respondents explained that healthcare personnel are not the same, some of them are non-judgemental and non-discriminatory when providing services (Duby et al, 2018). For instance, one female sex workers said,

> *"They are not the same, there is one who will treat you fine…..they are not the same: there are those who are fine and those who are not". [Female SW, FGD, Free State] (Duby et al, 2018).*

Stigma and discrimination contributed to internalised stigma whereby one experiences a feeling of unworthy and shame (Duby et al, 2018). Key informants from a randomized control study in three transit hubs; Chirundu, Kapiri Mposhi and Livingstone in Zambia highlighted the interlink between internalised stigma, fear of an HIV diagnosis and sex work. They indicated that due to self-stigma, FSWs do not go for HIV testing with the perception that as a sex worker the result will just be positive. Other sex workers feared lack of confidentiality and concerned that if they get tested the whole community would know about their status (Chanda et al, 2017). Some results showed that internalised stigma resulted in negative health-seeking behaviours for instance when female sex workers reported that they felt ashamed and embarrassed as nurses always scold them and this resulted in lack of willingness to go back to health facilities (Duby et al, 2018). Due to internalised stigma there was delayed seeking of care by FSWs and chances to receive proper services were missed (Duby et al, 2018). One sex worker responded saying that she defaulted on her antiretroviral treatment because of the healthcare workers who were judgemental hence it was scary for her to go to the clinic (Duby et al, 2018). The SW said,

> *" There's nowhere else I can go (for healthcare)….it has been three months since I last had my treatment. I take pills (ARVs) but because the Sisters don't treat me well I have decided to stay without the treatment (implying HIV). This thing also makes me feel bad because I know that it is my life…They (nurses) just scold at you that you have come to irritate them. "We are not able to help you, go"… Nurses don't treat us like people." [Female SW, FGD, Free State] (Duby et al, 2018).*

Mental health status of a FSW has an influence on utilisation of treatment. For instance, an International Rapid Assessment Methodology from three major urban centres in Mozambique found that previously, participants chose not to get tested for HIV because they were afraid of testing HIV positive and how that would affect their mental health and life (Langa et al, 2014).

3.1.7. Personal beliefs about treatment and Empowerment

Personal beliefs about treatment are an important variable on utilization of services by FSW. Having had many years of condoms being the only means of preventing contraction of HIV during sexual intercourse, the introduction of PrEP received disbelief. Missy, a participant in a study that was conducted in two urban clinics in Pretoria and Johannesburg on Treatment and Prevention for Sex workers (TAPS) demonstration project, spoke about the disbelief her sisters and colleagues had about PrEP being genuine and looked for more information about it (Eakle et al, 2019). . Some sex workers could not believe the existence of PrEP and one sex worker indicated that coming to the TAPS clinic did not mean she believed in PrEP but the desire to know more about PrEP.(Eakle et al, 2019).

One participant said, "It is a good idea for people like us who have multiple partners, because some will accept condoms and others not, so a drug like this which is good and will help to prevent infection… it is mandatory to swallow, you cannot refuse to swallow" (Van Elst et al, 2013).

The TAPS project also PrEP that with time, personal beliefs were overridden by participants who were still HIV-negative proving that PrEP was genuine and people who were not part of the study began to develop interest (Eakle et al, 2019). Some participants expressed concern regarding risk compensation by indicating that as a result of the perceived effectiveness of New biomedical Prevention Technologies (NPTs), such as PrEP some SWs would involve themselves in high risk behaviour (Rubincam et al,2018

The influence of personal beliefs about treatment on utilisation of health services by FSWs is also evidenced in a cross-sectional baseline study that was conducted in Pretoria, South Africa whereby a FSW's own preparedness, being afraid of after effects of the treatment, taking a daily dosage, and the perceived hustle of collecting ART (Wechsberg et al, 2017, Eakle et al, 2017). A prospective observational cohort study that was done in two urban cities in a South Africa found that that PrEP adherence fluctuated between 70% and 85% while 90% of participants were taking ART on a daily basis (Eakle et al, 2017). The side effects from the available drugs were considered to be a major hindrance to utilisation (Eakle et al, 2018). The study by Eakle did not have a comparison group which limits the efficacy of assessing the success of the services.

Empowerment has an influence in utilisation of HIV prevention services by sex workers as recognition promotes will-power. FSWs in a randomized control study for three transit hubs in Zambia reported that hiring FSWs to take up jobs in different organisation increased knowledge and encourage HIV testing (Chanda et al, 2017).

3.1.8 Community influences

3.1.8.1 Stigma and community organisation

Stigma and community organisation hinder uptake of HIV testing, ART, PrEP and adherence by FSWs. The majority of the reviewed studies in Sub-Saharan Africa reported stigma associated with HIV and sex work to be the leading barrier for FSWs to access HIV testing (Nnoko et al 2019).

There is evidence in support of the idea that community organisations should be at the centre of service provision such as HIV testing, enrolment of HIV infected FSWs into suitable treatment plans, adherence and care (Sarkar, 2010). Twenty community mobilisation meetings were held by SWV in Zimbabwe with 200 FSW to empower them and seek treatment (Mtetwa et al,2013). A study on three transit hubs using randomized control trials and focus group discussions in Zambia reported that FSWs feared gossip about them in the community once they are seen going into the Voluntary Counselling and Testing room (VCT) and that deterred them from HIV testing (Chanda et al, 2015). FSWs are labelled by the name (magosha) prostitute which is a disrespectful slang term in in South Africa (Duby et al,2018). As a result of discrimination, FSW operate in hiding and work far from places of residency to avoid dismissal, scorn and socially ban by the community and religious groups (Scorgie et al, 2013a). The interviews done in different sites for a study in South Africa was that FSW who were willing to get tested got discouraged by discrimination and social isolation (Scorgie et al, 2013b). A study that was conducted in Limpopo with female sex workers, found that a lot of participants dreaded the abuse and gossip they suffered from the community hence they kept their sex work secretly (Scorgie et al, 2013b). FSWs who were suspected of being HIV positive, on ART or PrEP were subject to gossip, lose clients and suffered discrimination in the community (Maria et al, 2013).

3.1.9 Position of religious/ cultural leaders

Healthcare personnel indicated that their reasons for being judgemental towards sex workers were based on their religious and Christianity beliefs whereby sex work is considered unacceptable (Duby et al, 2018). In another study in an environment dominated by Catholic, Muslim and Christian religion, participants indicated that PrEP might be considered in comparison to other prevention methods because it is not a contraceptive (Maria et al, 2013)

3.2. Interpersonal/Networks influence on Utilization of HIV Testing, PrEP and ART

3.2.1. Social Support and Trust

Social support and trust (including families)

Social isolation deters FSWs from utilising HIV prevention and treatment services A review which included observational studies, randomized control trials, peer reviewed programme reports reported that adherence barriers for FSWs, include absence of support from family and partners (Bekker et al,2015). FSWs with experiences of ART expressed the need for

social support when taking pills as it helped to ensure adherence (Eakle et al,2018). Social and cultural isolation combined with stigma and discrimination further reduces sex worker access to social and health services (UNAIDS,2014. FSWs usually have broken and family relationships. An observational study within Yeleron in Burkina Faso reported that adherence to treatment was successful and sustained without clinical efforts due to support by an outreach team as well as a peer educator team that provided sadherence support together with clinicians on a monthly basis (Huel et al, 2011). A similar study from Chennai, India found that lack of support from families influenced utilisation of treatment by FSWs (Mtetwa et al,2013).

Participants from another study noted the potential for rumors to persist even if family and friends are informed about using PrEP as a prevention measure for reducing risk of HIV infection (Maria et al, 2013). One way or another, support systems for pill taking were important in maintaining use. Others ended up losing family, friends, or partners over their participation in the study and PrEP use. This was an unfortunate development, but it also usually resulted in a reaction of asserting a sense of empowerment or control. For instance, a participant decided to stay in the study and lose her boyfriend who would not believe that she was taking ARVs for prevention, rather than give up taking PrEP (Eakle et al, 2019)

3.2.2. Social networks/coalitions

Social networks have an influence on utilisation of HIV services by FSW. Sex Workers Education and Advocacy Taskforce (SWEAT) in South Africa conducts creative space workshops (CSWs) for SWs which promotes positive health, behaviour and coping mechanisms (Samudzi et al, 2015). Concurrently, Sisonke a movement for SWs in South Africa attached to SWEAT also enables SWs to meet and socialise, share experiences, network, support and mobilise each other (Samudzi et al, 2015). A Gauteng mapping study reported that a spirit of unity and sisterhood occurred amongst FSWs and that enabled them to support one another in times of sickness (SWEAT, 2013)

3.2.3 Relationship power and equity and level of relationship

Relationship power and level of relationship influences utilisation of services by FSWs. Participants from a randomized control study in three transit hubs in Zambia reported that they go for HIV testing when clients or partners want to know the FSWs' status before engaging in sexual intercourse (Chanda et al, 2017).

In a study that was conducted in Northern Cape in South Africa participants were particularly in favour of promoting PrEP because most participants were actively involved in sex work, and often faced challenges to HIV prevention including convincing paying partners to use condoms, (Maria et al, 2013) Losing loved ones because of taking PrEP was a regrettable situation but it was due to a feeling of standing up for control (Eakle et al, 2019). For example, rather than quitting from the study and defaulting on PrEP, a

participant lost her boyfriend who doubted that the ARVs she was taking were for prevention (Eakle et al,2019). The report on a study in Soweto indicated that FSWs in Soweto suffered abuse from their clients and foreign FSWs would have clients refusing to pay them or wear condoms and instead threaten to report their illegal status to the police (SWEAT, 2013).

3.3. Institutional/Health System Influences

3.3.1. Provision of appropriate services

Provision of appropriate services to FSWs influences their utilisation of HIV services. Interviews that were conducted for a study in two cities of South Africa, Bloemfontein and Nort West indicated that lack of health and educational information related to key populations in the health facilities was described in a study as non-inviting and exclusive of key populations (Duby et al, 2018). Furthermore, it was reported that healthcare workers were judgemental and many respondents concurred that healthcare personnel in government facilities do not have the skills and knowledge to cater for their needs (Duby et al, 2018. The respondents expressed dissatisfaction due to the non-availability of some services at the clinics and they aired that all their healthcare needs should be available for them on top of the available diabetes screening and HIV testing (Duby et al, 2018).

3.3.2. Competent supportive providers

Competent supportive providers influence utilisation of HIV services by FSWs. A study using randomized control trials (RCT) and focus group discussions (FGD) in three transit hubs in Zambia reported the judgemental attitudes by healthcare providers whereby counsellors make stigmatizing comments while providing HIV testing services to FSWs (Chanda et al,2017).

Participants from a study in Limpopo reported of their experiences with healthcare workers whereby they simply gave them paracetamol in place of antibiotics (Oliveira, E 2018). Sex Worker respondents did not feel comfortable to disclose what they do to healthcare personnel and this left healthcare workers not well-informed about the risks and needs of such a population (Oliveira 2018). A study in South Africa found that the need for supportive, non-judgmental services tailored to sex workers was a general response (Eakle et al,2018) As a result of the judgemental and discriminatory attitudes of public sector healthcare workers, and the non-conducive clinic environments, FSWs respondents from a study in Bloemfontein, Free State and Mafikeng in the North West expressed a preference for health services delivered through community and outreach-based programmes, or by the private sector. Due to the judgemental attitude shown by healthcare personnel, a sex worker respondent indicated that she was scared of such attitude which resulted in her defaulting on antiretroviral treatment (Duby et al,2018).

Respondents from Zambia and three different, far apart provinces in South Africa provided similar responses. Studies for this variable used randomized control trials, in-depth interviews and focus group discussions. Hence, the data collected might be reliable considered that three methods of data collection were used in different settings.

3.3.3. Peer Navigators/advisors

Peer Navigators can influence utilisation of services by FSWs in South Africa. In the evaluation of the Red Umbrella Sex Work Programme, Peer Navigators are involved in HIV testing campaigns for FSWs, refer sex workers to healthcare and services, track and ensure they receive the health care services needed, follow up on adherence to treatment as well as their referral status. Adherence support and tracing for defaulters is done in a personalized manner together with the local primary healthcare where the SWs on treatment initiation stage and the ones at risk of defaulting receive services. This implies that Peer Navigators can help steer HIV testing and treatment interventions (Rangasami et al, 2016).

A systematic review study done in Johannesburg shows that Peer Navigators can positively influence the uptake of HIV testing through encouragement and motivation to take the test. The study reports strong motivation to access HIV testing services among FSWs coming from their peers and that the use of trained FSW peers in creating demand for HIV testing can increase the uptake of these services (Nnoko et al, 2019). In a study conducted in the DRC, the use of FSW peers led to a significant improvement in the uptake of HIV Testing and Counselling services . However, poor solidarity might take place among FSWs as a result of being highly mobile and violence (Nnoko et al, 2019). This explains that Peer Navigators can be a driver for the HIV testing and treatment interventions because they understand their peer FSWs better which makes it easy to mobilise the FSWs for HIV testing, ART, PrEP and Adherence. Hence, this needs to be explored at a wider scale.

3.3.4 Friendly/Culturally competent environment

Sex worker friendly health services promote access and uptake of HIV treatment adherence (Wilson, 2015). Focus group discussions for a study that was done in Zimbabwe revealed that FSWs experienced humiliation and ill-treatment at a health facility for ART initiation hence they would never go back there again (Mtetwa et al, 2013). In another study, respondents spoke highly of the healthcare personnel indicating that they treat them with dignity (Fobosi et al,2017). According to comparisons done by multivariate models on choices of care services either public, private or targeted in all cities, targeted interventions were ($p<0.005$) chosen by sex workers due to friendly healthcare workers who observe privacy, reduces waiting time, less costs and quality of care which is not the case at public health facilities (Lafort et al, 2016). The problem is that in terms of coverage, not all FSWs are reached by the targeted interventions.

3.2.5. Convenient responsive services

Convenient responsive services have an influence on utilisation of such by FSWs. Thus, a study was conducted in nine sites from seven provinces in South Africa and participants who were interviewed reported that they expressed satisfaction in terms of the position where the clinic was situated, the services they could receive, opening and closing time and the fact that they received services at no cost (Fobosi et al., 2017b)The FSWs suggested an adjustment for the health facilities to open on Saturdays and operate until 10 o'clock pm/midnight or to provide a round the clock service (mostly for emergencies) in order to improve on their access (Fobosi et al., 2017a). The respondents complimented the high standard reception they received from the healthcare personnel which they considered to be good treatment and they were also content with the size of the facility. Other participants expressed that they were shy to receive services at the public health facilities and the RWC was convenient for them (Fobosi et al., 2017c). Participants from a study in Johannesburg indicated that flexibility in service delivery was important for PrEP since they had to work for long periods to raise their rent hence they did not have time to go to the health facilities as well as the mobile nature of their work (Eakle et al., 2017).

Participants from another study in Limpopo reported that they had no access to safe public health services and they indicated that preferred private or traditional health services or none (Oliveira E, 2018). In another study, SWs receive healthcare services at the healthcare facilities in their residential areas although they are mobile, working from one truck stop equipped with wellness facilities to the other which they cannot use as they are only meant for long distance truck drivers (LDTDs) (Makhakhe et al, 2017).Most participants for the study done at Cato Ridge cited that as SWs , they could not access the clinic due to constraints at the truck stop while some participants indicated that it was in close proximity (Fobosi et al, 2017). Results from the study at other sites for instance Upington, Ngodwana and Musina indicate that participants mostly the ones around Musina border expressed satisfaction with the accessible location of the health facility (Fobosi et al, 2017). This implies that the health facility is within reach or they can travel there at no costs. It could also imply that there is availability of transport. The results are contradictory in the sense that some FSWs expressed satisfaction with the service provision while others were not happy and others had to seek treatment from traditional healers. This implies that there is unequal distribution of services for the FSWs in South Africa hence there is poor coverage.

3.3.6. Sufficient Resourcing of services

Sufficient resourcing of services influence utilisation of services by FSWs. Whether a FSW is HIV negative, on PrEP or ART they still need condoms. The sex worker has to ensure that she has enough condoms to use during sex work (Makhakhe et al, 2017). A study in Johannesburg and Durban found that although condoms were given free of charge at the public health facilities, participants in another study reported that nurses provided a limited number of condoms to the sex workers as well as stigmatising them during collection

(Makhakhe et al, 2017). In a study that was conducted in six sites in South Africa, all the participants with the exception of Hillbrow in Johannesburg reported that it was a challenge to get condoms when they are working in rural areas or outlying parts of the urban areas. It was also reported that a clinic in Musina sold condoms to sex workers which were meant to be distributed for free (Scorgie et al. 2013a). While another study that was done in South Africa found that counsellors are constantly changing which compromises continuity and care. Getting ARVs is a struggle for FSWs and it was reported that at Esselen street clinic for SWs some healthcare workers were selling medication which was meant to be for free (SWEAT,2013). In another study in South Africa, it was reported that the majority of programmes are centred on primary prevention and HIV testing activities and their geographic reach is only in the metropolitan areas (Lane et al, 2018).

3.3.7 Confidentiality/Privacy

Confidentiality is influential in utilisation of services by FSWs. One barrier to disclosure about their illness and status to both police and healthcare workers was the lack of confidentiality: A FSW respondent in an interview for a study conducted in two South African cities; Bloemfontein and Mafikeng explained that as a consequence of the lack of confidentiality at the clinics, she chose to seek assistance instead from traditional herbalist healers to treat her STI symptoms (Duby et al, 2018). One respondent said the following;

"I am scared of going to the clinic because we say these things in front of the nurses… When she (nurse) leaves you in the room she goes out and tells people that 'magosha' are here to irritate them looking for condoms. 'They are sick, the men they sleep with have given them sores'…. I once had a problem with a very scary sore (STI)… Since l was scared of going to the clinic I took traditional Sotho herbs. There was no chance that I would go to the clinic because the Sisters talk about us… We are terribly scared of nurses". [Female SW, FGD, Free State] (Duby et al,2018).

In another finding from a study in six urban sites in Kenya, Zimbabwe, Uganda, and South Africa, it was frequent that healthcare workers at public health facilities would ask participants about their work and if it happened that sex work was mentioned as the occupation such details were immediately shared with present family members and providers. Usually, SWs are asked unnecessary and unbecoming questions as well as being advised to quit sex work (Scorgie et al, 2013a). A common finding in the same study was that when participants attend public facilities, health providers ask what work they do and if sex work is disclosed the information is revealed to other providers and even to accompanying relatives. FSWs are also commonly interrogated (Scorgie et al, 2013a). This means that confidentiality of FSWs is compromised at which in any case is discouraging to seek for health provision in that kind of space. Once FSWs opt for traditional health services then it means defaulting and that means an increase in HIV incidence and prevalence.

3.3.8 Service integration and Support tools

Service integration and support tools can influence utilisation of services by FSWs. There are studies which have suggested that service integration influence utilisation of HIV services by FSWs. Informants in a randomized control study in three transit hubs in Zambia indicated that queuing up to collect antiretroviral treatment was visible to everyone such that it was easy to identify people living with HIV and because of that FSW chose not to test for HIV (Chanda et al, 2017). A study that was conducted in two clinic based settings in Pretoria and Johannesburg, South Africa found that provision of PrEP in parallel to ART would help to reduce stigma (Eakle et al,2018)

Besides equipping with knowledge regarding the drug and regimen, counselling aimed at creating a good relationship between the participants and counsellors and that promoted adherence (Van der Elst et al, 2013). Participants indicated that during counselling they learnt to develop courage, and taking the drugs fearlessly (Van der Elst et al, 2013).

3.3 Legal and policy factors

3.3.1. Structural level includes macro-level factors

Funding for appropriate interventions

Table 1: HIV, STIs and TB response for sex workers in South Africa (2012–2015)

Funder	Number of supported sites / districts	Number of sex workers reached	Package of services
National Department of Health	3 938 sites in 9 provinces	71 770[e]	Peer education Health care
The Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund)	70 sites in 9 provinces	39 312	Peer education Health care Psychosocial service Human rights Social capital-building
The United States President's Emergency Plan for AIDS Relief (PEPFAR)	8 districts in 8 provinces	41 911	Peer education Health care Psychosocial service

Source: SANAC, 2015.[95]

Am lot of FSWs are totally dependent on the sex work programmes grant from Global Fund (**See Table 1 above**) because Global Fund provides a package of services which is unique about it and this implies that when the grant ends most programmes will close-out and bigger organisations will downsize their functions and interventions (Rangasami et al, 2016). As a result, a huge number of SWs will not receive essential health services (Rangasami et al, 2016). Sex work programmes receiving funding from Global Fund, PEPFAR and the South African government have increased and to date providing services to sex workers (SANAC, 2016). For a successful implementation of the South African National Sex Worker HIV Plan to decrease HIV prevalence among this population there is need to mobilise for more resources (SANAC,2016). South Africa will need to top up resources on

what it is receiving from Global Fund Proposal, the PEPFAR Fund for sex work programmes and the National Department of Health (NDoH) HIV and AIDS Conditional Grant funding (SANAC,2016). This implies that available funding is not enough for the needs of the FSWs. There is also need to forecast in terms of funding for the sake of continuity should donor funding end, otherwise 39,312 sex workers who are receiving HIV prevention services from global fund will be left without access to HIV prevention services.

Public policy and laws

Public policy and laws influence how FSWs utilise the HIV prevention services. According to the South African Constitution (Bill of rights-section 27), it is every citizen's right to access health services (Mahlathi et al, 2015). Ever since the past twenty years, there has been distinct changes in the South African policing agencies towards rights, HIV and diversity (Gomez et al,2016). It is a challenge for Female Sex Workers to receive healthcare services at facilities without producing a residence or work permit for immigrants, proof of residence of identity papers (Rangasami et al, 2016). Department of Health, municipality and mobile clinics do not provide services to such patients and the most affected are foreign nationals who are excluded from receiving medical treatment, have limited legal support and get harassed by the police (Rangasami et al,2016). The South African National Strategic Plan on HIV, Sexually Transmitted Infections (STIs) and Tuberculosis for 2012-2016 comprises most important interventions aimed at scaling down new infections nationally by 50% while targeting a population scale up of 80% on treatment by employing combination prevention (Gomez et al, 2016). The strategy named key populations as the centre of attention and this requires a mixed line of action in order to respond to the epidemic (Gomez et al, 2016). This increased contact with the health system may increase overall FSW health in addition to direct benefits from HIV prevention (Department of Health South Africa, 2016).

However, the Sexual Offences Act (No, 23 of 1957) and the Criminal law (Sexual Offences Act (No.23 of 1957) Amendment Act (No 32 of 2007) criminalises sex work and municipal by-laws do not allow prostitution or soliciting The Sexual Offences Act of South Africa criminalises sex work and a lot of studies have evidence about the damage caused by the criminal law on the sex work industry (SANAC,2016). Studies show that criminalisation pushes sex workers to operate in hiding where there is no access to supportive services among others health and legal while stigma is also increased making sex workers to become powerless and exposed to violence, corruption and violations of their rights(SANAC,2016).The code of conduct of South African Police Service (SAPS) which shows the South African Constitution commits to support and protect each citizen's basic rights.(SAPS 2015). However, findings revealed that SWs had challenges in reporting cases to police as sometimes they get persuaded to have sex with police to keep away from arrest (Samudzi et al, 2015).

Enforcement of policies and laws

Criminalisation and law enforcement on the lives of FSWs holds them back from utilising HIV prevention and treatment services thereby hindering effective outcomes of PrEP and ART. Sex work is a crime in South Africa (Huschke,2019). Hence, it is illegal to buy, sell or organise the sale of sex. Evidence has shown that the enforcement of the prostitution legislation exposes FSWs to sexual violence while the client is protected (Amnesty International, 2016). For instance, evidence has shown that police hinder the HIV prevention interventions by seizing condoms and that being found with condoms is a sex worker (Scorgie et al, 2013a). Confiscation of condoms counter-acts outcomes for PrEP and ART and all efforts to prevent HIV transmission, reinfection and opportunistic infections depending on whether a FSW is HIV negative, on PrEP or on ART. An NGO operating in Thohoyandou in South Africa which has been keeping track of condom distribution reported that police confiscate condoms from SWs as well as destroying unofficial sites that are meant for condom distribution to SWs. The police also arrest any person found in possession of condoms at night (Scorgie et al,2013a).

Criminalisation impedes access and utilisation of HIV treatment as well as adherence to treatment and viral suppression. FSWs will move or go into hiding to avoid arrest coupled with detention and lack of access to services are serious barriers to HIV treatment initiation and adherence (Scorgie et al, 2013a). A study that was done in two South African cities found that migrant FSWs reported being victimised and detained by police (Scorgie, 2013b).

Summary of Findings

It is worth mentioning that key findings have emerged such as knowledge, risk perception, social support, distrust of healthcare, competent supportive providers, convenient responsive services, confidentiality, public policy and laws and enforcement of laws. Some results are conflicting which show that there was need for a different study design to confirm. The interventions based on community outreach services and peer navigators as well as TAPS seem to be effective.

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4.0 CHAPTER FOUR: EVIDENCE BASED INTERVENTIONS IN SOUTH AFRICA AND OTHER COUNTRIES

South Africa

The TAPS demonstration project was an observational cohort of 12 months meant to integrate real PrEP as a combination prevention approach and integrate early ART into current services. HIV negative FSWs were given PrEP while HIV positive FSWs were given early ART at two clinic sites catering for SWs in Pretoria and Johannesburg. Assessments were done on the number of FSWs invited for the intervention, those who took up the test, those who tested HIV negative and positive and the ones who participated in the intervention. FSWs who took part were monitored of their stay and use of ART or PrEP for 12 months. After screening, 93% were eligible for PrEP and 94% for early ART while 98% and 94% were initiated on PrEP and ART. After a 12 month assessment 60% was still on ART and 22% on PrEP. Due to mobility of FSWs, some clients are thought to have gone to other sites now offering early ART and PrEP. In terms of outcomes, there were not many side effects from the drugs and were safe. The FSWs who remained in the study were taking pills on a regular basis while none in the PrEP group contracted HIV and very few FSWs on early ART had challenges with viral suppression (Eakle, 2018).

4.2 Sub-Saharan Africa

4.2.1 Tanzania

Evidence suggests that FSWs in Tanzania have difficulty in accessing HIV care and treatment due to stigma related to sex work, risk perception about treatment, lack of knowledge/information and healthcare costs (Tomori et al,2014). To respond to the challenges, Project Soar together with the National AIDS Control Program of Tanzania, National Institute of the Medical Research and JHPiego Sauti Programme conducted a quasi-experimental design on community-based ART services for FSWs in Tanzania (Project Soar,2019). The study was conducted over six months in seven districts- four for the intervention in Mbeya and three for the comparison arm in Njombe. At six months, the FSWs in the comparison arm (standard ART delivery arm) had high stigma than the FSWs in the intervention arm. With regression analysis, this implies that high levels of stigma had a link with not initiating on ART. Thus, FSWs with high levels of stigma were not likely to initiate on ART while FSWs who received community-based ART initiated on ART. This intervention was successful because Peer educators who were familiar with the FSWs were engaged in recruitment for testing, retesting and initiation on ART and the FSWs received adherence counselling and a month's supply of ART immediately. ARVs. FSWs could collect their ART refills at Community-based HIV testing and counselling service (CBHTC+) mobile tent or get them dispatched at home or at a favourable place. The same Peer educators from diagnosis to treatment initiation and beyond, were constantly in touch with the clients making appointments for monthly adherence support meetings and collection of ARVs. There were more friendly FSWs Healthcare Facilities because there were trained healthcare

workers and peer educators (Project Soar, 2019). A control arm was used which made it easy to assess the effectiveness of the intervention.

4.2.2 Kenya

The Bar Hostess Empowerment Programme from Kenya set out to teach local sex workers about the country's laws both local and national as well as the rights of sex workers and post training they became paralegals (UNAIDS,2014). The product was a strong network of sex workers who are empowered and cannot be kept down and community driven interventions could benefit them (UNAIDS,2014).

4.3 Burma -Low income country

In Burma in its capital city Yangon, The Targeted Outreach Project (TOP) was formed and to date it has been active in 18 cities with a total reach of 62,000 SWs (UNAIDS,2014). Non-stigmatizing drop-in centres which provide access to free health care and a holistic package of services which not only look at HIV and STIs were developed (UNAIDS, 2014). The community educators are sex workers who live in the communities they work and TOP introduced an inclusive approach whereby SWs, department of health and local authorities, other partners and sex workers themselves were engaged right from the beginning. As a result of empowerment, emotional support and advocacy, TOP requires that local SWs take charge and authority over the centres. TOP keeps track of the performance of the centres using a simple and accessible method for instance condom use by SWs and clients at the last sexual encounter by making use of a coupon box and 3 symbolic colours. TOP strives to meet its goals which are a stigma and violence free environment with affordable and accessible health provisions. Over and above all, SWs are given the platform to partake in decision making at every level.

4.4 Zimbabwe

The Sister with a voice (SWV) intervention could also be suitable for the South African context (Mtetwa et al,2013).

5.0 CHAPTER FIVE DISCUSSION

This study looked at the problem that was identified in the statement of the problem which is so far there are gaps in HIV care cascade, which is timely diagnosis of HIV infection, treatment initiation and linkage to care the poor utilisation of HIV prevention and treatment services by sex workers in South Africa. The results are discussed based on the current situation of the problem in concurrence with the programs in South Africa as well as a comparison with other countries with reference to best practices**.** Results from the literature review which include individual factors, interpersonal/ network factors, community factors, institutional/health system factors and structural factors based on the selected conceptual framework are discussed.

The findings in the South African setting show that a combination of factors play a role in explaining utilisation of HIV prevention and treatment services by FSWs. Low utilisation cannot be explained by one factor because there is an interlinkage of factors taking place. However, the most important factors that have a direct influence and are a pervasive barrier on utilisation of HIV testing, PrEP, ART and Adherence are stigma at individual and community level, motivation, socioeconomic status, distrust of healthcare, convenient responsive services, social support and trust, social networks, public policy and laws and enforcement of laws.

Stigma is a common issue between the individual and community factors and it is also experienced under the interpersonal factor where for instance FSWs are shunned or lose support of their families as well as in the health system. Stigma at individual level is interlinked with knowledge or information in the sense that lack of knowledge or information for a FSW results in stigma. If a FSW is empowered with knowledge, she will not have internalised stigma but will actually be motivated to get an HIV test, PrEP or ART given the information at her disposal. However, some factors are more important for one intervention than the other.

Not much has been studied on FSWs in the rural areas, farming areas, internet-based and mobile and what influences their utilisation of HIV prevention services. In terms of the enforcement of laws are the rural area FSWs experiencing the same punitive measures as those experienced in the urban areas. The studies were carried out in urban centres and highways hence it is not known how 12% of FSWs in rural areas and 37% in small towns are covered. The FSWs in rural, urban and small cities have different dynamics which means they are chances that they have been left out. This implies that the studies might not have

given a full representation of experiences for all FSWs from diverse settings and backgrounds.

Although this was not mentioned but from my own experience of working with sex workers, they experience a lot of mental challenges and addiction to drugs especially the ones who are owned by brothel owners. This requires further research as few articles were found so as to inform the policy makers and programme implementers in order to maximise health outcomes in this subpopulation.

Again other variables were left out because they are not relevant to this study. This was not mentioned but again from my experience, an element that should have been added as it has an influence on utilisation of HIV prevention and treatment services is the one on Hotel owners and brothel owners. They have so much control over the FSWs such that they decide whether the FSWs should attend workshops, support groups or go to the health facilities for treatment or allow Peer navigators into their premises

Conceptual framework

Elements such as intentions or readiness of change, preparatory behaviour and perceived control under individual level were irrelevant because this study was not about asking FSWs to change their behaviour or stop sex work. Under interpersonal level relationship satisfaction, relationship health/intimacy, level of relationship commitment and communication level were irrelevant because this study was not about relationships of FSWs considering that sex work is work and feelings are rarely attached to it. The isms and peer pressure under community and poverty, education curriculum, gender equity, access and cost of services were also irrelevant as they do not fit my setting. I would use this conceptual framework as it is has elements that help to gather detailed information and also that it considers all the systems central to an individual.

Institutional/Health system

The findings regarding health Workers breach of confidentiality/privacy against FSWs in South Africa was consistent with other African countries such as Zimbabwe, Zambia and Mozambique. Another study that was conducted in Zambia whereby participants reported community discrimination is also consistent with the study that was done in Limpopo, South Africa.

The issue of migrant FSWs has been mentioned in the introduction but it was not the main focus of this thesis. However, with the continued influx of migrant FSWs into South Africa there is going to be a huge burden on the Health sector and other sectors at large which have a direct influence on the health sector such as water and sanitation as well as housing.

Limitations

Snowball was used as a search strategy hence all articles in this study may have not have been included resulting in selection bias and reduced validity of findings. Access to some relevant articles was restricted hence the reported findings might not be generalisable to the FSW population. Articles found covered more on PrEP than ART. Working on three interventions was not easy- if it was one intervention, a more in depth analysis could have been done. The variables on the conceptual framework were too many so due to word count limit other variables which are not important had to be left out. Again other variables were left out because they are not relevant to this study. Again other variables were left out because they are not relevant to this study. Interventions such as oral PrEP was rolled out in 2016 therefore it might take time for FSWs to be aware of it and seek initiation. Since FSWs are highly mobile and hard to reach, the findings reported were from FSWs reached and those not reached might have different views regarding the interventions. Hence, missing their responses including additional subpopulations of FSWs like internet-based reduces the generalizability of results. Again, most of the studies were conducted in urban areas which imply that results might not be representative of subpopulations of FSWs in the farming areas and small towns. Therefore it lacks external validity hence, generalizability is reduced. However, the fundamental part played by expert FSWs in the findings might have strengthened the validity of findings. Prior knowledge of the sex worker programme has made it easy for me to understand some of the issues

6.0 CHAPTER SIX : CONCLUSION AND RECOMMENDATIONS

Concluding remarks will be highlighted and recommendations provided based on the findings.

6.1 Conclusion

From the evidence that has been presented in this study, influential factors to utilisation of HIV testing, PrEP and Adherence have been revealed. These are stigma, knowledge, social support, distrust of healthcare, competent supportive providers, convenient responsive services, confidentiality and public policy and laws.

It is worth mentioning that some evidence-based interventions to improve utilisation of HIV testing, PrEP, ART including adherence were identified in Sub-Saharan and LMICs might be applicable to the South African context. For instance, Community-based ART services model from Tanzania whereby ART is dispatched at the FSWs' home or favourable place and Peer educators are points of contact. This intervention will work against issues such as stigma, confidentiality, convenient responsive services. The TAP intervention of South Africa is commendable and only needs to be extended across all districts for Universal Health Coverage (UHC). of The TOP non-stigmatizing drop-in centres providing access to a holistic package of free health care services in Burma with sex workers themselves in charge of the drop-in centres and decision making will be applicable to the South African context. With this intervention all the influential factors to utilisation of HIV services mentioned above will be addressed favourably. Over and above all, FSWs will be empowered, will feel responsible, accepted and a sense of belonging which is crucial for HIV prevention and treatment.

However, if these issues are not addressed, a high prevalence of HIV as well as relatively huge risks of continued HIV transmission among FSWs with HIV but not virally suppressed and the ones who are HIV negative considering the huge sexual networks. Therefore, maximizing FSWs HIV testing, treatment and adherence is important for the FSWs and population health.

6.2 RECOMMENDATIONS

Recommendations for Policy makers (NDoH, Government, SANAC, Department of Social Development (DSD), Department of Home Affairs (DHA)

- Involvement of FSWs including migrants in sex work programmes design
- Policy to reduce binge alcohol intake
- Further support the ongoing lobbying for decriminalisation of sex work
- Continued involvement of private organisations for additional funding for the FSW interventions (on top of the current government and donor funding) for sustainability purposes
- Consider community-based ART distribution

Recommendations for Implementers (NGOs, NDoH, Private Organisations)

- Sensitisation training for the community, government departments, SAPS, community and faith-based organisations, religious and traditional leaders to oppose and reduce stigma and discrimination against sex workers
- Community delivery models that are people oriented whereby experiences of sex workers as well as civil society organisations are used by peer networks, community health workers and other community-driven service delivery to ensure that all sex workers utilise all services.
- Capacity building for healthcare workers: Sensitisation training for all healthcare workers in order to encourage utilisation and retention in care by bringing into existence spaces that are friendly, supportive, client-centred and non-judgemental to the sex worker population for successful delivery of PrEP and T&T. Where training is already in existence, it should continue as well as extend to all provinces.
- Competence strengthening of implementers and government departments and community mobilisation for sustainability purposes.
- Sex worker organisations should partner or align with NDoH in order to improve on coverage and utilisation as well as sustainability and continuity should donor funding stop.
- Use of support tools, messaging-for constant tracking and follow up on FSWs

Recommendations for Health Facilities

- Regular in-service training for healthcare workers
- Ensure confidentiality/ privacy of patients is observed
- Hold monthly meetings to support adherence- with representatives of FSWs, community gatekeepers, family members, representatives of community-based organisations, representatives of faith-based organisations, brothel owners

Recommendation for Health Workers

- Observe guidelines and standard operating procedures (SOPs)
- Adhere to ethical procedures-to be able to observe confidentiality and privacy of clients
- Stick to Professional conduct-in order to assure clients of their competence

Recommendation for research

- Mental health of FSWs
- Drug addicted FSWs-how to bring them on board for HIV testing and treatment services
- FSWs in farming areas and rural areas- to inform implementers to ensure equitable utilization of HIV testing, PrEP and ART.
- Mobile and internet-based sex workers-to inform implementers to ensure equitable utilization of HIV testing, PrEP and ART.

- Further research to inform implementers on other required interventions focused on HIV testing, treatment, adherence and care for better, lasting outcomes among FSWs.

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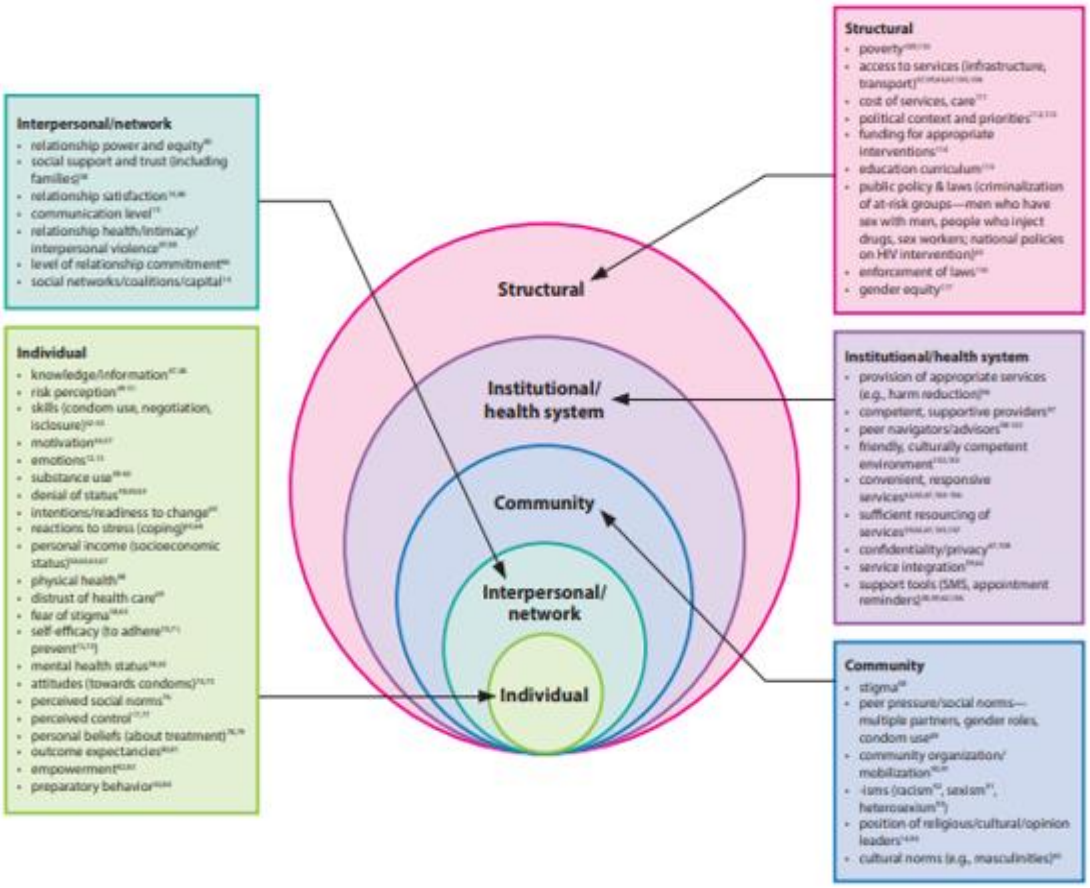
Appendix 1 :Search Table

Overview of search terms per category for literature review (categories are combined using AND)				
Category 1	HIV , AIDS			
Category 2	Key population Sex workers, FSW			
Category 3	Intervention : ART **OR** PrEP **OR** adherence testing			
Category 4 Factors	Objective 1: Individual level-includes micro-level factors • Knowledge /information • Risk perception • Motivation • Substance abuse • Distrust of healthcare • Personal beliefs about treatment • Personal income Interpersonal/Network level: • Social support and trust (including families) • Social networks • Relationship power and equity • Level of relationship commitment	Objective 2: Health system factors: institutional level- includes macro-level factors • Friendly, culturally competent • Environment • Service integration • Confidentiality/privacy • Provision of appropriate services • Convenient responsive services • Support tools (SMS, appointment reminder) • Peer navigators/Advisors	Objective 3: Legal and policy Structural level-includes macro-level factors • Public policy/laws • Enforcement laws • Political context & priorities • Funding for appropriate services	) Objective 4: Global interventions-Proven effective

	• Social cohesion • Social coalitions Community level • Stigma • Position of religious/cultural/opinion leaders • Cultural/social norms • Community organisation			
Category 5	Setting South Africa **OR** Sub-Saharan Africa **OR** Southern Africa **OR** Low-middle-income countries (LMICs			

Appendix 2 ***Health behavior change models for HIV prevention and AIDS care: practical recommendations for a multi-level approach. AIDS***



Source: Kaufman, M. R., Cornish, F., Zimmerman, R. S., & Johnson, B. T. (2014). Health behavior change models for HIV prevention and AIDS care: practical recommendations for a multi-level approach. AIDS Journal of Acquired Immune Deficiency Syndromes, 66, S250-S258.