BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF HEALTH SCIENCES

Knowledge, Attitude and Practices on Sexually Transmitted Infections (STIs) among Commercial Sex Workers Receiving HIV Pre-Exposure Prophylaxis (PrEP) at Mucheke Clinic in Masvingo.

BY
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Research Project Submitted in Partial Fulfilment of The Requirements of Bachelor of Science Honours Degree in Nursing Science (Nursing Education) at Bindura University of Science Education

Year of Submission-2024

Declaration

I, Melody Nyengerai declare that this project is an original work and has not been submitted to this university or any other university in Zimbabwe.

Student signature…  …… Date 07/07/2024

Approval Form

The undersigned certifies that they have supervised, read, and recommended to Bindura University of Science Education for acceptance a research project entitled: Knowledge, Attitude and Practices on Sexually Transmitted Infections (STIs) Among Commercial Sex Workers Receiving Human immunodeficiency virus (HIV) Pre-Exposure Prophylaxis (PrEP) at Mucheke Clinic in Masvingo, Zimbabwe, submitted in partial fulfilment of the requirements of the Bachelor of Science (Honours) Degree in Nursing Science (Nursing Education).

To be completed by the student:

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MELODY NYENGERAI Date – 07/07/2024

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To be completed by the supervisor:

This dissertation is suitable for submission to the faculty and was checked for conformity with the faculty guidelines

……. …….

Mrs. S. C Katsinde Date

(Signature of the supervisor)

To be completed by the chairperson of the department:

I certify that to the best of my knowledge; the required procedures have been followed and the preparation criteria have been met for this dissertation.

…… …….

Ms. A. MANWERE Date

(Signature of chairperson)

Acknowledgements

Firstly, I give thanks to the Lord almighty for guiding me through this educational path, without whom I would have not made it thus far.

I would also like to express my sincere gratitude to my supervisor, Mrs. S.C Katsinde for providing expert and in-depth reviews throughout the entire project course. Without her professional expertise, patience and dedication, this project would have been unsuccessful.

I also extend my gratitude to the District Medical Officer of Masvingo district and Matron of Mucheke clinic for granting me permission to conduct this study. Additionally, I would like to thank the participants and all the nurses who contributed to the success of this research. Their support and cooperation were invaluable, and I appreciate their willingness to participate and share their insights.

In addition, I would like to thank all my lecturers at Bindura University of Science Education (BUSE) and my colleagues for their encouragement and impartment of knowledge throughout the course.

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Dedication

This dissertation is dedicated to my husband, Nomore and my two children, Tapiwanashe and Tavonga, for their moral support and love throughout this process. Being separated from you during this journey was not easy but knowing it was for a greater purpose made it worthwhile.

Abstract

The overall aim of the study was to assess knowledge, attitude, and practices on sexually transmitted infections among commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke Clinic, Masvingo. A quantitative, cross-sectional study design was used, and data was collected from commercial female sex workers who were on PrEP at Mucheke clinic in Masvingo. Purposive sampling technique was utilised to identify 153 participants. The Health Belief Model was used to guide the research, explain, and support the findings of the study. Interviewer administered questionnaires were used to collect the data from the participants. Data collected was analyzed using SPSS, interpreted, and presented in tables, graphs, pie charts and percentiles. Results show 42.5% of the participants were aged between 21-30 years and 68% completed secondary school. The participants demonstrated good knowledge on STIs/HIV as all (153) were aware that coughing, sneezing cannot spread HIV, anal sex can spread STIs, latex condom prevents STIs transmission and washing genitalia with soap after sex does not prevent STI/HIV infection. Over 90% of the participants knew that mosquitoes do not spread STI/HIV, faeces are not STI/HIV mode of transmission, multiple sexual partners increase the risk of contracting STIs, condoms do not make sexual contact completely safe, and PrEP is taken daily. Regarding attitudes towards STIs/HIV and PrEP, 100% agreed to taking PrEP daily and disagreed that it is difficult to use PrEP and condoms at the same time. All participants also disagreed that PrEP is just a project by the educated to test their medicine. About 98.7% agreed that PrEP is effective in preventing HIV infection. The majority 97.4% of the participants disagreed that they succumb to peer pressure not to use condoms. Regarding the type of sex participants engage in, majority, 98% indicated penetrative vaginal sex and 64% practices protected sex always with their regular partners. Among the participants infected with STIs while on PrEP, 40% are residence of Mucheke B. None of the participants never had an unplanned pregnancy whilst taking PrEP. With respect to types of contraception used by the participants, 96.73% are using dual forms of protection. In view of these findings, this study strongly recommends inclusion of STI in the school curriculum starting from primary school, use of dual contraceptives for high-risk population, continuous education on risk compensation and behavioural disinhibition at each refill visit ensuring adherence, and avoidance of high-risk behaviour.

Table of contents

List of figures

List of tables

List of abbreviations and acronyms

PrEP- pre-exposure prophylaxis

HIV- human immunodeficiency virus

AIDS- acquired immunodeficiency syndrome.

FSW- female sex workers

STI- sexually transmitted infections

WHO- World Health Organization

CHAPTER 1

1.1 Background to the study

Sexually transmitted infections pose a substantial public health threat globally. STIs are caused by various pathogens including bacteria, protozoa, fungal, viruses and parasites. Common STIs include but are not limited to Syphilis, Gonorrhea Lymphogranuloma venerum, Chancroids, Chlamydia, Trichomoniasis, HIV, HPV, herpes simplex virus Hepatitis B virus (UNAIDS, 2022, Assefa, Sema and Bezabih, 2021). Sexually transmitted infections are primarily transmitted by sexual contact and sometimes through sharing of needles, pregnancy, childbirth, and breastfeeding.

The 2022 UNAIDS report indicated that HIV and AIDS remains one of a major threat to public health and human quality of life and health, even though pharmacological and behavioral advancements significantly reduced its incidence. At the end of 2022, 39 million people were living with HIV& AIDS, of which 25.6 million constituting two thirds of people living with HIV are from Africa (UNAIDS, 2023). In 2022 only, 1.3 million people acquired HIV globally while over 630 thousand people died from HIV related illnesses (UNAIDS, ibid).

According to WHO (2018) the reduction of new infections is attributable to comprehensive HIV preventions strategies like behavioral change, antiretroviral therapy, elimination of mother-to-child transmission of HIV, pre- and post-exposure prophylaxis, voluntary testing and counseling, voluntary male medical circumcision, and harm reduction for intravenous drugs. Pre-exposure prophylaxis (PrEP) is the use of antiretroviral medications before HIV exposure and is a crucial strategy in the fight against transmission of HIV (WHO, 2018). The WHO in 2015 recommended PrEP to be offered to high-risk population and by 2021, 150 out of 165 (91%) countries worldwide including Zimbabwe adopted this recommendation to prevent HIV transmission in their national guidelines. The intervention is typically targeting high risk populations like female sex workers and key population. According to UNAIDS (2021), female sex workers are 26-fold higher in risk of contracting HIV compared to general populace and they constitute 9 % of global HIV infections. According to Nhamo et al (2022), the female sex worker in Zimbabwe has high risk of contracting HIV with an incidence rate of 10 percent compared to the national incidence rate of 0.47%, thus pointing to the need for targeted interventions. The risk is exacerbated by their work environment, risky behaviors like having multiple sexual partners, inconstant use of condoms, drug use, poverty, stigma, and discrimination.

With respect to other sexually transmitted infections (STIs), the global impact on sexual and reproductive health is profound. According to WHO (2023), about 374 million new infections

occurred in 2020. As such it is critical to understand that accurate and extensive knowledge, safe practices, and positive attitude towards STIs/HIV/AIDS are important in reducing incidence of STIs, HIV and unintended pregnancies. This research explored, knowledge, attitudes, and practices of commercial sex workers on pre-exposure prophylaxis.

1.2 Conceptual definition of Terms

Sexual transmitted infections- sexually transmitted infection is used to denote a variety of clinical conditions that are caused by pathogens which can be acquired and transmitted through sexual activity.

Commercial sex workers- any person who receive money or goods in exchange for consensual sexual services either regularly or occasionally.

Pre-exposure prophylaxis- is the use of antiretroviral medications by HIV-negative individuals before potential HIV exposure.

1.3 Statement of the Problem

The female commercial sex workers and their partners are among the vulnerable groups for sexually transmitted infections including HIV/AIDS. According to UNAIDS (2023) curable STIs, such as gonorrhoea, syphilis, chlamydia, and trichomoniasis, cause significant morbidity and mortality worldwide and thus are of global public health concern. STIs can have detrimental consequences with syphilis and herpes increasing the risk of HIV acquisition by at least three-fold. Human papilloma virus (HPV) infection causes cervical cancer. Gonorrhea and chlamydia are leading causes of infertility in women through pelvic inflammatory disease. According to National AIDS Council (NAC, 2020), the country has made efforts to have condoms available to vulnerable and key populations. However, only 67% of adult women including commercial sex workers with multiple sexual partners reported using condoms with such partners by 2019 (NAC, 2020).

1.3 Study Aim

The aim of the study is to explore the knowledge, attitudes, and practices about sexually transmitted infections among commercial sex workers in Masvingo who are receiving HIV pre-exposure prophylaxis as part of interventions to reduce HIV transmission among high-risk groups.

1.4 Research Objectives

1.4.1 Main objective:

To assess knowledge, attitudes, and practices on sexually transmitted infections among commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic in Masvingo.

1.5.2. Specific Objectives:

1. To assess knowledge about sexually transmitted infections among commercial sex workers HIV receiving pre-exposure prophylaxis at Mucheke clinic in Masvingo.
2. To assess attitude on sexually transmitted infections among commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic in Masvingo.
3. To explore on sexual practices of commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic in Masvingo.

1.4.3. Research Questions

1. What is the level of knowledge on sexually transmitted infections among commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic in Masvingo?
2. What is the attitude of female sex workers receiving HIV pre-exposure prophylaxis towards sexually transmitted infections at Mucheke clinic in Masvingo?
3. What are the sexual practices of female sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic Masvingo?

1.5 Significance of the Study

This study aims at exploring knowledge, attitudes, and practices of the commercial sex workers receiving HIV pre-exposure prophylaxis on STIs. It is hoped that findings of this study will provide evidence-based information on sex workers receiving HIV pre-exposure prophylaxis regarding knowledge, attitude, and practices on STIs. Knowledge about PrEP empowers commercial sex workers to make informed decisions. Positive attitudes toward PrEP encourage adherence, while understanding its limitations prevents unrealistic expectations. Understanding commercial sex workers knowledge on PrEP can help to enhance its effective implementation and this will impact on HIV prevention.

Sex workers on PrEP may engage in high-risk behaviors like condomless sex, potentially increasing STI risk thus monitoring knowledge, attitude and practices allows to address this by implementing strategies to prevent STIs. By assessing practices related to PrEP use, interventions can be tailor made to meet commercial sex workers needs comprehensively. This includes addressing barriers to adherence, stigma, and access to healthcare. Understanding commercial sex

workers' knowledge, attitude and practices also helps to design comprehensive care models that address both HIV and STIs.

1.6 Theoretical and Conceptual Framework

1.6.1 Theoretical Framework:

The theoretical framework focuses on theories that predict and explain phenomena such as relationship or behavior thus providing a guide to the research process (Saunders, 2011). The researcher based the research on the Health Belief Model theory.

The Health Belief Model

Source: Glanz, K. (2002) Health Behavior and Health Education Theory Research and Practice

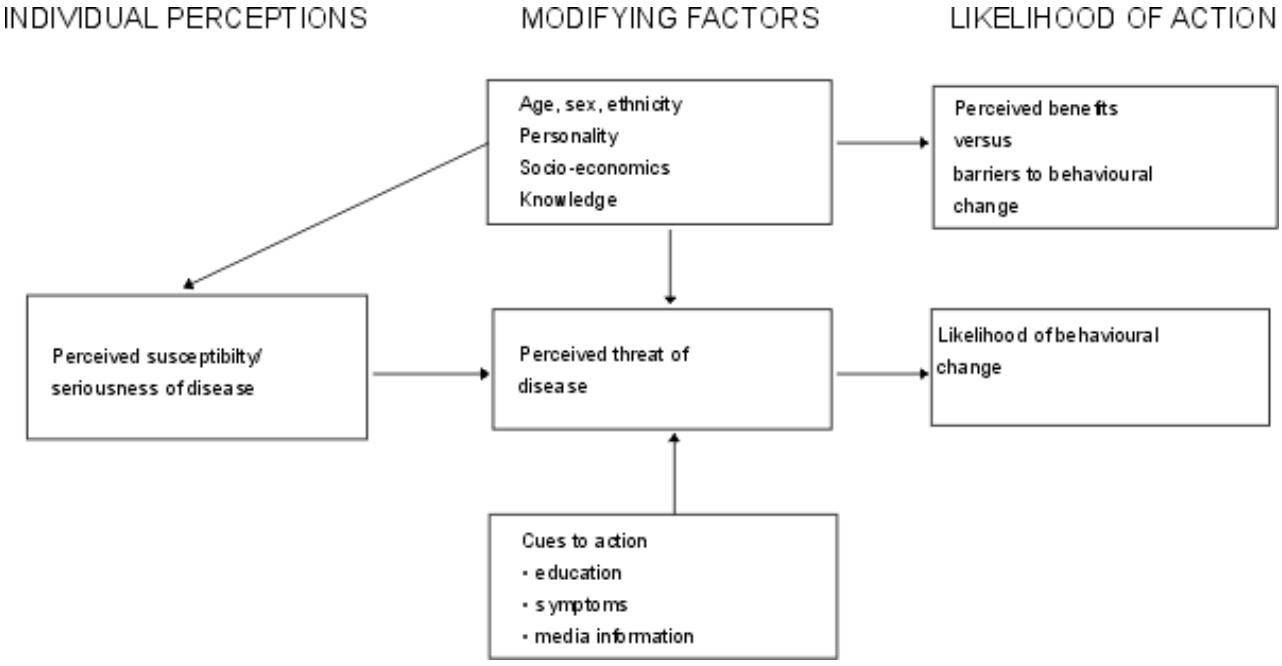

Figure 1.1- Health Belief Model

The Health Belief Model (HBM) is a theory that uses a psychological model to explain and predict health behaviour through focusing on the attitudes and beliefs of individuals **(Conner, 1996)**. It assumes an individual will take a health-related action (in this case, safer sex practices) if that person feels:

- That a negative health condition (that is STIs, HIV and unintended pregnancy) can be avoided
- That they will benefit positively by taking the recommended action (by using condoms in addition to PrEP, FSW will benefit by being free of HIV, STIs and unintended pregnancy)

- That FSWs can successfully take a recommended health action (correct, consistent, and confident use of condoms).

The Health Belief Model was modified into five main constructs perceived susceptibility, perceived severity, perceived beliefs, perceived barriers, and cues to action (Rosenstock, 1974). In line with this research the researcher's view of perceived susceptibility would be that FSW can acquire STIs and unintended pregnancies, perceived severity will present the belief that consequences of getting STIs or an unintended pregnancy are significant enough to avoid. Perceived benefits is the belief that the recommended action of using condoms would protect them from STIs and pregnancy, perceived barriers including lack of knowledge on condom use, failure to negotiate payments if using condoms, condom failures. The final construct cues to action will represent educational messages and counseling from the clinic from which PrEP is supplied, media messages etc. The interaction of these constructs would then influence the decision not to or to use a condom.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Literature review was described by Ramdhani, Ramdhani and Amin, (2014), as the process of reading, analysing, synthesizing, evaluating, and summarizing existing scholarly arguments about a study topic. This chapter will review in detail literature related to knowledge attitude and sexual practices at global, regional, and local context.

According to (WHO, 2023) HIV is a viral infection, which is transmitted from infected individuals through exchange of body fluids such as vaginal fluids, semen, blood, and breast milk. HIV can also be transmitted from the infected mother to her baby during pregnancy and delivery (WHO, IBID). It attacks the white blood cells thus weakening the immune system, progressing to AIDS if not treated and dearth. The compromised immune system exposes the infected person to opportunistic infections for instance pneumonia, tuberculosis, cancer, and other bacterial infections.

Risk sexual behaviour such as having multiple partners, infected with STIs, unprotected sex, men having sex with men, increases risk of HIV transmission. Though there is effective antiretroviral therapy to control the viral load and prevents HIV progression to AIDS and transmission, there is no cure for HIV.

According to UNAIDS (2023) there were approximately 39 million people living with HIV globally. An estimated 1.3 million people acquired HIV infection during the same year while over 630 thousand people died from HIV related illnesses. Female sex workers are 26 times at higher risk of contracting HIV infections compared to the general populace as they constitute 9% of the global HIV infections (UNAIDS, 2021). UNAIDS (2024) highlighted that HIV prevalence is more than twice in sex workers in relation to the general population.

With respect to other sexually transmitted infections (STIs), WHO (2023) indicated that an estimated 374 million new infections with 1 of the 4 curable STIs (gonorrhea, chlamydia, syphilis and trichomoniasis) occur every year and an estimated 1 million are acquired daily worldwide. It is estimated that more than 500 million people of reproductive age group (15–49 years) are infected with genital herpes simplex virus and human papillomavirus (HPV) which is associated with over 311 000 cervical cancer deaths every year. The World Health Organization highlighted that over

350,00 adverse births occurred in 2016 because of over 1 million syphilis infections among pregnant women. In addition, the emerging new infections that can be acquired by sexual contact such as monkey pox, Shigella Sonnei, Neisseria meningitides, Ebola and Zika increases challenges in the provision of comprehensive STIs prevention and control services (WHO, 2023).

Most of the people infected with HIV are in low-and middle-income countries. According to UNAIDS (2023), out of the 39 million people living with HIV in the year 2022, two thirds (25.6 million) are from Africa. East and Southern Africa region is most affected with 20.8 out of 25.6 million while West and Central Africa constitutes 4.8 million (UNAIDS, ibid). Zimbabwe has made great strides in prevention, resulting in a decline in estimated HIV prevalence rates from 25% in 2002 to around 11.5% in 2021 (UNAIDS, 2021). Likewise, the incidence of new HIV infections and AIDS-related deaths declined sharply to less than 20,200 in 2021. Though the country has seen this remarkable improvement, the prevalence is still unacceptably high (UNAIDS, 2019). As such HIV remains one of the major human qualities of life threats in Zimbabwe, with a prevalence of 11.58 per cent, translating into an estimated 1.3 million people living with HIV in 2021. Of these, about 72,100 were children 0-14 years and 77,300 adolescents aged 10-19. An estimated 53,000 pregnant women required prevention of vertical transmission of HIV services in 2021. Women have a higher prevalence rate (14.7%) than men (8.7%). HIV incidence is highest in females' ages 15-29 years. According to Zimbabwe Population Based Assessment (ZIMPHIA, 2020) the prevalence of HIV among adults ages 15 to 64 years in Zimbabwe is 14.6 percent: 16.7 percent among females and 12.4 percent among males. This corresponds to approximately 1.2 million people living with HIV (PLHIV) ages 15 to 64 years in Zimbabwe.

2.2 STI related knowledge

Imperical evidence available in public domain indicated significant correlation between level of knowledge and behaviour change. The study carried out by Dhliwayo (2019) in Kariba revealed that commercial sex workers with more STIs/HIV knowledge reported more frequent condom use. However, Ogunyemi and Osanyin (2020) argued that knowledge does not always guarantee adherence to safe sexual practices, as there are factors such as fear, discrimination, criminalization, loneliness, depression, which are involved in risky sexual behaviour. The study revealed that commercial sex workers have knowledge about the importance of having safe sex, but they are prejudiced by the desire of their sexual partners coupled by lack of negotiating power for condom

use. Other factors may lead these commercial sex workers to have unprotected sex includes better remuneration, emotional involvement, confidence in the partner and the effect caused using alcohol or drugs.

The National AIDS Council of Zimbabwe (2020) indicated that knowledge of how STI/HIV are transmitted is crucial to enabling individuals to avoid infection. This is especially true for commercial sex workers who are considered a conduit for STIs transmission because of their shorter relationships with multiple partners (UNAIDS, 2023), In view of this, it is critical that commercial sex workers have accurate and appropriate knowledge of STIs such that they can make informed decisions regarding prevention, control, and treatment.

2.3 HIV/AIDS related attitudes

Successful interventions in reducing the burden of HIV/AIDS epidemics require more understanding of sexual behaviors, attitudes, and practices of the community at risk. Previous studies have shown that attitudes towards people living with HIV/AIDS are diverse with many negative attitudes towards those HIV-positive. A study conducted in India by Ali et al, (2023) revealed that 24.6% of the participants supported compulsory isolating people infected with STIs for the sake of public safety. This shows a gap a negative attitude towards people infected with STIs. However, Ogunyemi and Osanyin (2020) claimed that good knowledge does not necessarily positively correlate to a positive attitude. Therefore, it is critical to acknowledge the knowledge and attitude of at-risk populations like FSWs when formulating a practical HIV prevention program. This ensures compliance to regular health checks which is crucial towards early diagnosis and treatment of STIs/HIV.

2.4 HIV/AIDS related practices

Monitoring of the sexual practices and behaviour of populations at high risk of STI/HIV infection is essential for tailored STI/HIV prevention interventions (UNAIDS, 2023). Condoms can substantially reduce the risk of sexually transmitting HIV. Consistently and correctly using condoms is therefore important for FSW because of the high risk of HIV transmission during unprotected anal sex (UNAIDS, ibid). However, various factors increase the risk of exposure to STI//HIV among FSW, including multiple non-regular partners and more frequent sexual intercourse (Ogunyemi and Osanyin, 2020). FSWs with more frequent sex work are less likely to use condoms. Frequent sexual relationships may go along with having multiple sexual partners, which would add to the risk of STI/ HIV infection (NAC, 2020). Additionally, having frequent

sexual relationships may provide greater opportunity for STI/HIV transmission due to increase the likelihood of unsafe sex and exposure to HIV infected partners (Ogunyemi and Osanyin, 2020).

Sex workers and their clients often have anal sex, but a relatively high proportion of customers insist on not using condoms, generating greater risk of contracting HIV and transmitting it to other sexual partners, either men or women (NAC, 2020).

Condom use with clients is directly proportional to the use of illicit drugs, alcohol, as well as to the level of knowledge of female sex workers about the modes of transmission of STI&HIV. According to NAC (2020) consistent condom use among commercial was only 45% in the months preceding the study.

CHAPTER 3

METHODOLOGY

Research methodology is an outline of specific procedures or techniques used to identify, select participants, or study area, processes, and analysis of information about a study topic (Polit and Beck, 2012, Grove, Burns and Gray, 2012). This chapter will describe the study design, study setting, study population, sampling and sample size, data collection and instruments, validity and reliability, data collection, ethical considerations, and data analysis.

3.1 Study design

A research design as defined by Prabhat and Pandey (2015) is a plan for a study that is used as a guide in collecting and analysing the data. It is a blueprint that is followed in completing a study. The researcher conducted a cross-sectional survey which is ideal for answering questions about the knowledge, attitude, and practices on STIs at Outpatient Department (OPD), sex worker clinic at Mucheke clinic, in Masvingo.

3.2 Study setting:

The study setting refers to the physical, social, or experimental context in which the research is conducted. This includes the time, location, population, and environmental factors (Saunders,2011). This survey purposely selected Mucheke Clinic in Masvingo because it is one of the clinics in the country offering HIV pre-exposure prophylaxis to commercial sex workers. Mucheke clinic is situated in the densely populated ancient location of Masvingo town which is a hive of commercial sex workers. The clinic started offering HIV PrEP to commercial sex workers in 2018 with support from Centre for Sexual Health and HIV AIDS Research, Zimbabwe (CeSHHAR).

3.3 Study population

According to Prabhat and Pandey (2015) study population implies, the total observations of interest, which is the parent group from which a sample is to be drawn. The study population were commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic in Masvingo.

Inclusion criteria

- Commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic regardless of age.

Exclusion criteria:

- Commercial sex workers not on HIV pre-exposure prophylaxis.

3.4 Sampling

Sampling is the systematic process of selecting a subset or given number of subjects/participants from the pool of all potential participants as representative of that population (Prabhat and Pandey, 2015). In view of limited time, a convenience sampling method was employed to select research participants. Convenience sampling is a non-probability sampling technique where participants are selected based on their availability and proximity to the researcher. This sampling technique was used because of ease accessibility of research participants to the researcher, cost effectiveness and time saving. There was no pattern of selecting research participants. The participants were merely selected on the bases of their availability and willingness to participate in the research. All commercial sex workers on PrEP who were present on the data collection days were asked of their willingness to participate in the study. Only the commercial sex workers who expressed interest were recruited into the study. The research repeatedly did this over a period of one and half months until a sample size of 153 was met.

3.4.1 Sample Size

According to Saunders (2011), a sample size is the number of participants or observations included in a study usually represented by n. The sample size has an influence on the precision of the estimates and the power of the study to draw conclusions. A total of 153 participants were selected. The sample size was calculated using a Raosoft sample size calculator. The calculation is based on a population size of 254 (number of sex workers in the PrEP project) at Mucheke clinic, response distribution of 50%, margin of error of 5% and 95% confidence interval.

$$\text{Sample size} = \frac{\frac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

where

z is the z score

ε is the margin of error

N is the population size

p̂ is the population proportion

Calculation of sample size.

$$\text{Sample size} = \frac{\frac{(1.96)^2 X\ 0.5(1-0.5)}{0.05^2}}{1+(\frac{(1.96)^2 X\ 0.5(1-0.5)}{0.05^2(254)})}$$

$$\text{Sample size} = \frac{\frac{\mathbf{3.8416X0.25}}{\mathbf{0.0025}}}{\mathbf{1}+(\frac{\mathbf{3.8416X0.25}}{\mathbf{0.025X254}})}$$

$$\text{Sample size} = \frac{\frac{0.9604}{0.0025}}{1+(\frac{0.9604}{0.635})}$$

$$\text{Sample size} = \frac{384.16}{2.5124}$$

Sample size- 153

3.7 Data collection procedure and instruments:

Data collection is a systematic process of gathering observations or measurements to gain the original insights and knowledge on the research problem (Prabhat and Pandey, 2015). Prabhat and Pandey (ibid) further defined an instrument as a device used to collect, measure, and analyze data related to the subject. An interviewer administered questionnaire was used to collect data.

The questionnaire was developed in English by the researcher, following a review of relevant literature and guidance from the supervisor. In view of limited time, closed ended questions were used to gather focused, quantitative data from respondents as it is easy to group, compare and analyze. The questionnaire comprises of the following parts:

- Part A -socio-demographic
- Part B-questions on knowledge on HIV, PrEP, STIs
- Part C -questions on attitude towards PrEP, HIV and STIs
- Part D- questions related to practice of safer sexual and reproductive health.

The data was collected over a period of one and half months from the 15 April 2024 to 30 May 2024. The researcher reported to the nurse-in-charge every morning before commencing data collection. Thereafter, permission was also sought from the commercial sex worker on PrEP. The participants were selected based on their availability at the clinic on the interview date and their willingness to participate in the research. To avoid inconveniencing the participants, those who gave consent to participate in the study were interviewed while still waiting for their supplies. The interviews were contacted in a separate room to ensure privacy. The participants were assured of confidentiality. The participants were requested to sign a written consent form before participating in the research. Each interview took an average of 30 minutes to 40 minutes to be completed. The process was repeated until a sample size of 153 participants was reached.

3.9 Validity and Reliability

According to Saunders (2011) reliability is the extent to which data collection techniques and analysis yields consistent results, whereas validity is whether the findings are really what they appear to be about. In this study reliability was ensured by developing an interviewer questionnaire with precisely defined concepts and well framed constructs. The questionnaire was piloted on 10 participants drawn from Mucheke clinic and anomalies corrected before conducting the actual study. The participants in the pilot study were excluded in the main study.

Validity of a research study refers to how well the results among the study participants represent true findings among similar individuals outside the study (Prabhat and Pandey, 2015). The researcher ensured validity by consulting with experts in the fields and with the supervisor. The study design followed a standard set of protocols that makes logical sense, hence maintaining internal validity. The questionnaire implored open and closed ended questions.

3.7 Pilot Study

A pilot study is a small feasibility study meant to test various aspects of the methods planned for a larger, more rigorous, or confirmatory investigation. In this study, pre-testing of the questionnaire

was done at Rujeko clinic to ensure clarity, readability and correction of any anomalies on the questionnaire. This ensured that the study instrument collects consistent data.

3.8 Data Analysis

Data analysis refers to the process of applying statistical or logical techniques systematically to describe and illustrate, condense, and recap, and evaluate data (Saunders, 2011). In this study, collected data was organized in tables and frequencies and then analyzed using Statistical Package for the Social Sciences (SPSS), version 29. Data was presented in frequency tables, graphs and pie charts.

3.11 Ethical considerations

Ethical considerations are a set of principles that guide the research designs and practices. These include informed consent, voluntary participation, confidentiality, anonymity, potential for harm, and results communication (Saunders, 2011). The researcher sought approval from the ethics review committee of the Bindura University of Science Education, Ministry of Health Zimbabwe through District Medical Officer, Masvingo district. Permission was also sought from the participants and those willing to participate voluntarily were be asked to sign consent forms. The participants' confidentiality was preserved, and anonymity ensured. Data was kept under lock and key to ensure confidentiality.

CHAPTER 4

RESULTS AND INTERPRETATION

4.1 Introduction

This chapter discusses the data analysis and findings of the study. The purpose of this study was to assess the knowledge, attitude, and practices on sexually transmitted infections among commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke Clinic in Masvingo. Data was collected from 153 participants using a self-administered questionnaire. The response rate was 100%. Analysis of the data was done using the SPSS version 29. Presentation of results was guided by the research questions:

1. What is the level of knowledge on sexually transmitted infections among commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic in Masvingo?
2. What is the attitude of female sex workers receiving HIV pre-exposure prophylaxis towards sexually transmitted infections at Mucheke clinic in Masvingo?
3. What are the sexual practices of female sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic Masvingo?

4.2 Demographic data

4.2.1 Demographic characteristics of the participants:

Table 4.1 Demographic characteristics of participants

(N=153)

Variable	Frequency	Percent
Age of respondents		
Below 18 years	4	2.6
18 to 20 years	24	b15.7
21 to 30 years	65	42.5
31 to 40 years	50	32.7
Above 40 years	10	6.5
Total	**153**	**100.0**
Place of residence		
Mucheke A	57	37.3
Mucheke B	67	43.8
Mucheke C	14	9.2
Mucheke D	7	4.6
Other-Mbudzi	2	1.3
Other-Mucheke F	6	3.9
Total	**153**	**100.0**
Level of education		
Primary	20	13.1
Secondary	104	68
High School	17	11.1
Tertiary	12	7.8
Total	**153**	**100.0**

Table 4.1 above shows the demographic characteristics of the participants. The participants age ranges from 17 to 44 years with a mean age of 27 years. Majority of the participants were in the age group 21 to 30 years 65 (42.5%). Most participants lived in Mucheke B 67 (43.8%) whilst Mucheke A had 57 (37.3%), Mucheke C, 14 (9.2%), Mucheke D, 7(4.6%) and other locations, 6 (3.9%). Majority of the participants104 (68%) completed secondary school whilst 17 (11.1%) completed high school education. The highest attained level was tertiary by only 12 (7.8%) while 20 (13.1%) attained primary school level.

4.2.2 Duration in sex work:

Table 4.2 Duration in sex work

(N=153)

Variable	Frequency	Percent
Duration in sex work		
1 to 3 years	39	25.5
Less than 1 year	16	10.5
More than 3 years	98	64.0
Total	**153**	**100.0**

Table 4.2 above shows most participants 98 (64%) had over 3 years' experience working as commercial sex worker with only 16 (10.5%) having less than one year experience.

4.2.3 Duration as a resident of Masvingo:

Table 4.3 Duration as resident of Masvingo

(N=153)

Variable	Frequency	Percent
Duration as resident of Masvingo		
1 to 3 years	36	23.5
Less than 1 year	18	11.8
More than 3 years	99	64.7
Total	**153**	**100.0**

Table 4. 3 above shows that most of the participants 99 (64.7%) stayed in Masvingo for over 3 years while only 18 (11.8%) stayed in Masvingo for less than one year. The other 36 (23.5%) stayed in Masvingo between 1 and 3 years.

4.2.4 Duration on PrEP:

Table 4.4 Participants duration on PrEP

(N=153)

Variable	Frequency	Percent
Duration on PrEP		
Less than 3 months	7	4.5
3 to 6 months	18	11.8
More than 6 months	128	83.7
Total	**153**	**100.0**

The PrEP project enrolled participants in 3 months cohorts, thus the researcher grouped duration on PrEP into groups of 3 months each. The table 4.3 above shows the majority 128 (83.7%) of the participants were on HIV PrEP for more than 6 months, while only 7 (4.5%) were on HIV PrEP for less than 3 months. The remaining 18 participants (11.8%) were on PrEP for over 6 months.

4.2.5 Income:

Table 4.5 Participants' monthly income in US dollars

(N=153)

Variable	Frequency	Percent
Monthly income		
0 to $299	149	97.4
300 to $600	3	2.0
Above $600	99	0.6
Total	**153**	**100.0**

Regarding monthly income, the majority, 149 (97.4%) earn between 0 to 299 US dollars, 3 (1.96%) participants earn between 300-600 US dollars and only one (0.65%) earns above 600 US dollars.

4.2.6: Source of Income

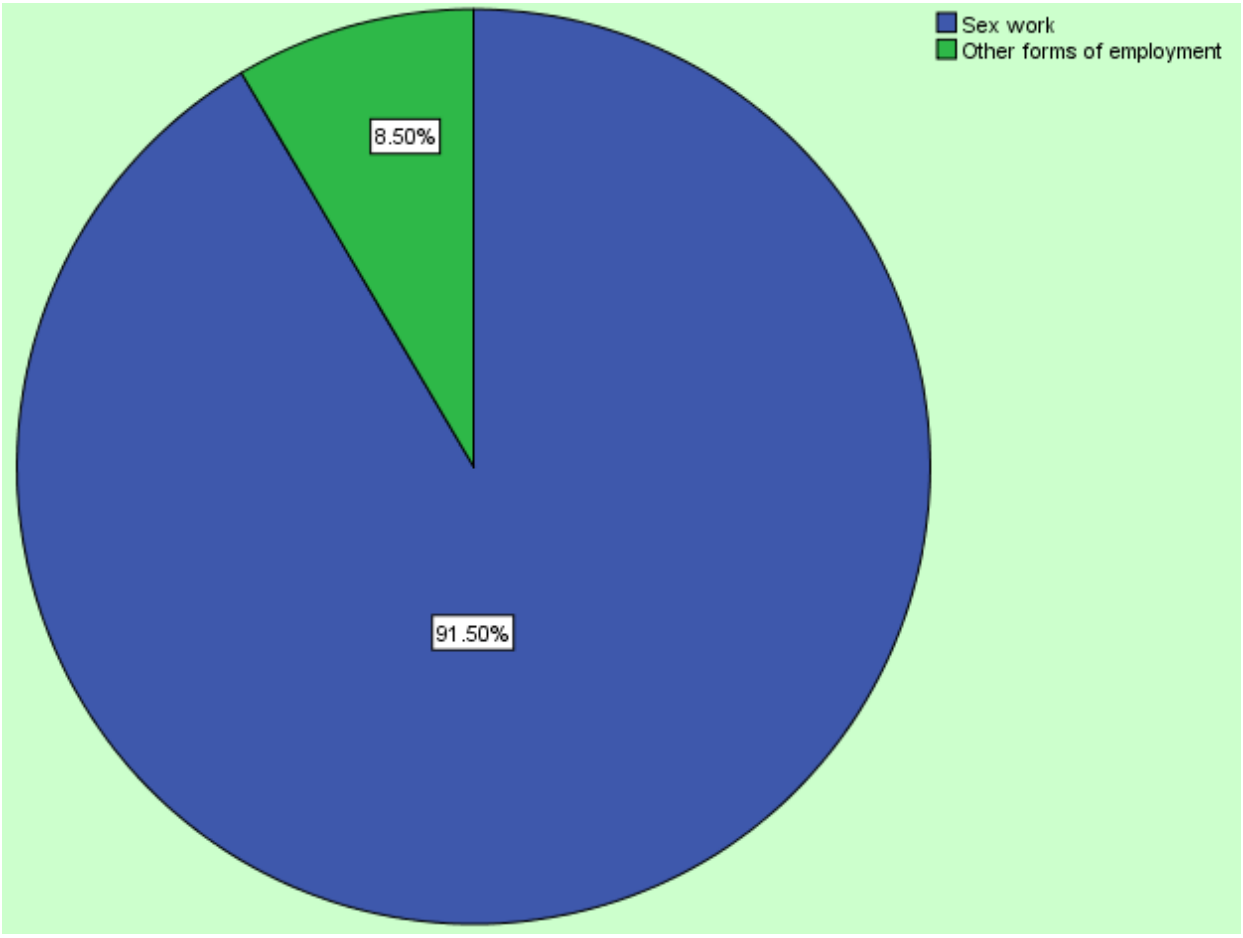

Figure 4.1Participants' source of income.

The figure 4.1 above shows the majority, 140 (91.5%) earned their income from sex work. Only `13 (8.5%) reported other sources of income.

4.2.7 Access to media messages on HIV/STI's:

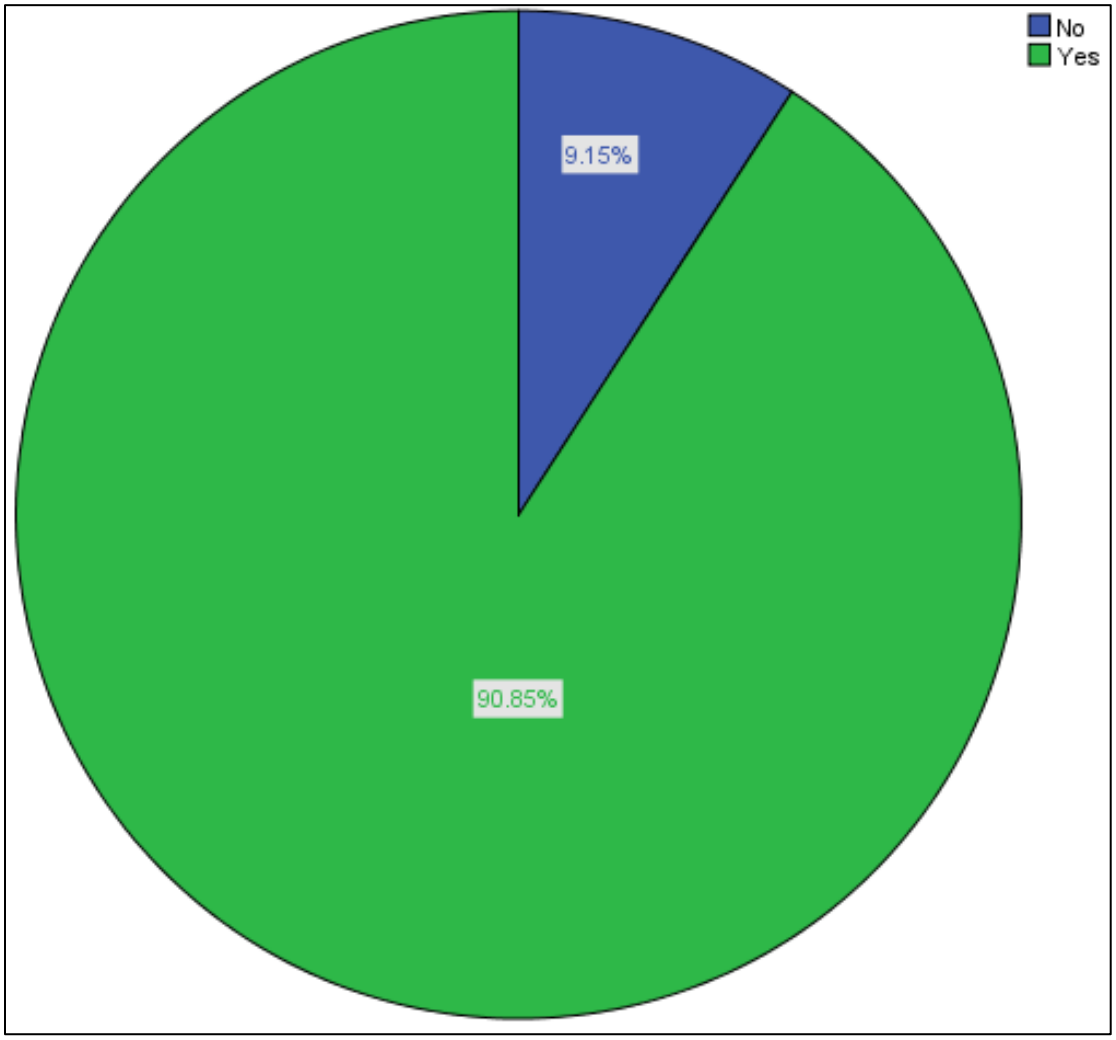

Figure 4.2 Pie chart showing accessibility of media messages by respondents.

Figure 4.2 above shows the majority 139 (90,85%) participants had access to media messages and only 14(9.15%) expressed that they do not have.

4.3 Knowledge of participants on STIs/HIV

4.3.1 Knowledge of participants on STIs/HIV transmission

Table 4.6 Knowledge on STI/HIV transmission

(N=153)

Variable	Frequency	Percent
AIDS is caused by HIV		
No	0	0
Yes	153	100.0
Total	**153**	**100.0**
HIV virus is found in high concentration in saliva, tears, and urine		
No	150	98.0
Yes	3	2.0
Total	**153**	**100.0**
Mosquitoes can spread HIV		
No	150	98.0
Yes	3	2.0
Total	**153**	**100.0**
Coughing and sneezing can spread STI/HIV/AIDS		
No	153	100.0
Yes	0	0.0
Total	**153**	**100.0**
Contact with faeces can spread STI/HIV/AIDS		
No	148	96.7
Yes	5	3.3
Total	**153**	**100.0**
Multiple sex partners increase the risk of contracting STI/HIV/AIDS		
No	4	2.6
Yes	149	97.4

Total	**153**	**100.0**
Anal sex does not spread STIs		
No	153	100.0
Yes	0	0.0
Total	**153**	**100.0**

Table 4. 6 above shows knowledge to different questions on STI/HIV transmission. All 153 (100%) of the participants were aware that AIDS is caused by HIV, and that coughing, and sneezing cannot spread HIV and that anal sex can spread STIs. Regarding concentration of virus in saliva and tears, the majority, 150 (98%) did not agree whilst only 3 (2%) believe that high concentration of the virus is found in tears and saliva. The majority 150 (98%) of the participants knew that mosquitoes do not spread STI/HIV and only 3 (2%) said that STI/HIV may be spread by mosquitoes. Regarding HIV transmission through faeces, the majority, 148 (96.7%) knew that this is not HIV mode of transmission while the other 5 (3.3%) believed that they can acquire STI/HIV through contact with faeces. A total of 149 (97.4%) participants knew that having multiple sexual partners increases the risk of contracting STIs and only 4 (2.6%) disagreed.

4.3.2 Knowledge of participants on STIs/HIV prevention

Table 4.7 Knowledge on STI/HIV prevention

(N=153)

Variable	Frequency	Percent
If a man withdraws his penis before ejaculation it prevents from HIV/ STIs		
No	150	98.0
Yes	3	2.0
Total	**153**	**100.0**
Latex condoms when engaging in sexual intercourse is a measure of HIV infection prevention		
No	0	0.0
Yes	153	100.0
Total	**153**	**100.0**
Condoms make sexual contact completely safe		
No	134	87.6
Yes	19	12.4
Total	**153**	**100.0**
Washing genitals with soap immediately after sex can prevent STIs		
No	153	100.0
Yes	0	0.0
Total	**153**	**100.0**
Condoms prevent spread of genital warts		
No	0	0.0
Yes	153	100.0
Total	**153**	**100.0**

Table 4.7 above shows varying participants' knowledge to different questions on STI/HIV prevention measures. The participants demonstrated some knowledge on HIV prevention as all (100%) correctly indicated that latex condom use is a measure of STI/HIV prevention, condoms can prevent spread of genital warts and washing genitals with soap after sex do not prevent STI/HIV infection. The majority 150 (98%) of the participants correctly answered that penis withdrawal before ejaculation does not prevent STIs/HIV transmission while only 3 (2%) believe this prevents the transmission. Relating to condom safety, the majority, 134 (87.6%) expressed that condoms do not make sexual contact completely safe with the other 19 (12.4%) reiterating that condoms made sexual contact completely safe.

4.3.3 Knowledge of participants on STIs/HIV signs and symptoms

Table 4. 8 Responses on STIs signs and symptoms

(N=153)

Variable	Frequency	Percent
All STIs have visible signs and symptoms		
No	139	90.8
Yes	14	9.2
Total	**153**	**100.0**

Regarding knowledge on signs and symptoms of STIs, table 4.8 above shows the majority 139 (90.8) knew that some STIs do not show signs and symptoms while the other 14 (9.2%) expressed that all STIs have visible signs and symptoms.

4.3.4 Knowledge of Participants on STIs/HIV Treatment

Table 4.9- Knowledge on STI/HIV treatment

(N=153)

Variable	Frequency	Percent
Zimbabwean prophets and/or traditional healers can treat STIs and HIV/AIDS		
No	142	92.8
Yes	11	7.2
Total	**153**	**100.0**
There is no need to seek treatment if a genital ulcer disappears		
No	145	94.8
Yes	8	5.2
Total	**153**	**100.0**
You take PrEP only after sex without a condom		
No	153	100.0
Yes	0	0.0
Total	**153**	**100.0**
It is ok skip PrEP doses once in a while		
No	153	100.0
Yes	0	0.0
Total	**153**	**100.0**
All circumcised men are HIV negative		
No	149	97.4
Yes	4	2.6
Total	**153**	**100.0**
Circumcised men cannot spread or acquire HIV or STIs		
No	153	100.0
Yes	0	0.0
Total	**153**	**100.0**

Table 4.9 above shows the participants' responses on STI/HIV treatment. All 153 (100%) participants indicated that HIV pre-exposure prophylaxis is taken daily, and not only taken after sex without a condom. All 153(100%) also knew that circumcised men can spread HIV/STIs. Regarding the traditional healers and prophets' ability to treat HIV/AIDS, the majority, 142 (92.8%) of the participants believe that prophets and traditional healer do not treat HIV while the other 11 (7.2%) expressed that they are able to treat. On genital ulcers a total of 145 (94.8%) knew that there is need to seek treatment even if a genital ulcer disappears while the other 8 (5.23%) said there is no need for seeking treatment. This lack of knowledge implies that there is risk of spreading the infection when the ulcer disappears without treatment. Only 4 out of 153 (2.6%) thought that all circumcised men are HIV negative. The other 97.4% (n =149) expressed that not all circumcised men are HIV negative.

Figure 4.3- Responses on role of PrEP on STI transmission.

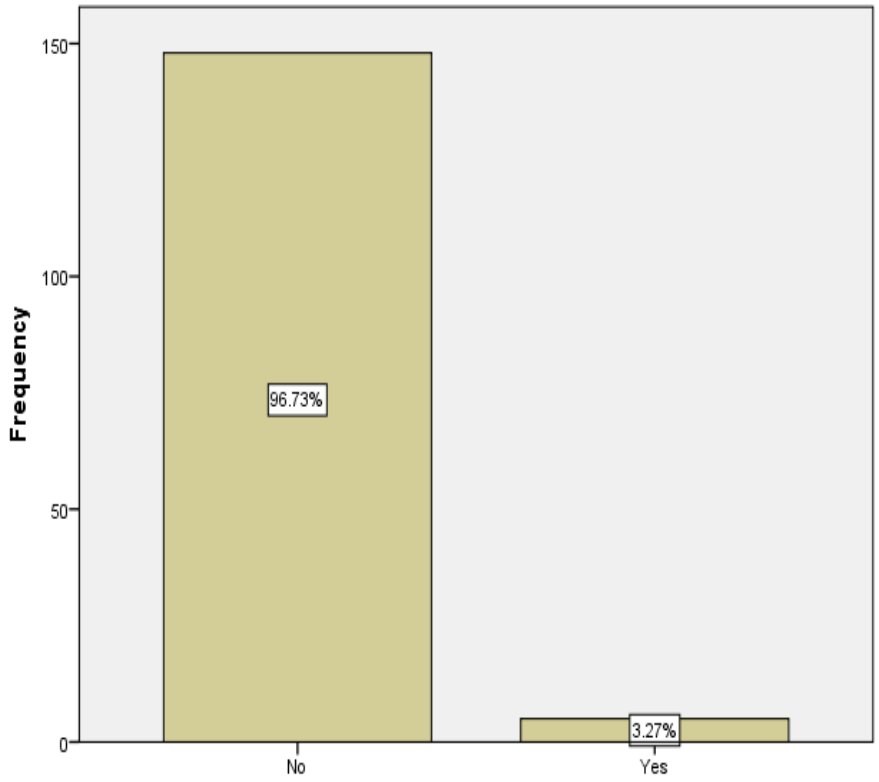

Figure 4.3 above shows a graph on the role of HIV pre-exposure prophylaxis on sexually transmitted infections transmission and the majority 148 (96.7%) knew that HIV pre-exposure prophylaxis does not protect the transmission of sexually transmitted infections while the other 5 (3.3%) expressed that HIV pre-exposure prophylaxis protects them from acquiring sexually transmitted infections.

4.4 Attitudes:

Table 4.10 Results of responses to attitude towards STIs/HIV

(N=153)

Variable	Frequency	Percent
I take PrEP daily		
Agree	153	100.0
Disagree	0	0.0
Don't know	0	0.0
Total	**153**	**100.0**
I think PrEP works		
Agree	151	98.7
Disagree	0	0.0
Don't know	2	1.3
Total	**153**	**100.0**
I believe PrEP is just a project by the educated to test their medicines and make money of sex workers.		
Agree	0	0.0
Disagree	153	100.0
Don't know	0	0.0
Total	**153**	**100.0**
HIV is a curse from God for bad behavior		
Agree	2	1.3
Disagree	151	98.7
Don't know	0	0.0
Total	**153**	**100.0**
I worry about what others think if I am on PrEP.		
Agree	6	3.9
Disagree	147	96.1
Don't know	0	0.0
Total	**153**	**100.0**

It is difficult to use PrEP and condoms at same time		
Agree	0	0.0
Disagree	153	100.0
Don't know	0	0.0
Total	**153**	**100.0**

The above table 4.10 shows all participants 153 (100%) agreed to taking HIV pre-exposure prophylaxis daily but disagreed that it is difficult to use HIV pre-exposure and condoms at the same time. Participants also disagreed that HIV pre-exposure prophylaxis is just a project by the educated to test their medicine and make money out of sex workers. Regarding its effectiveness 151(98.7%) agreed that PrEP is effective in preventing HIV infection while the other 2 (1.3%) were not sure. Most of the participants 151 (98.7%); disagreed that STIs/HIV is a curse from God while only 2 (1.3%) believed that it is a curse from God.

Response to peer pressure

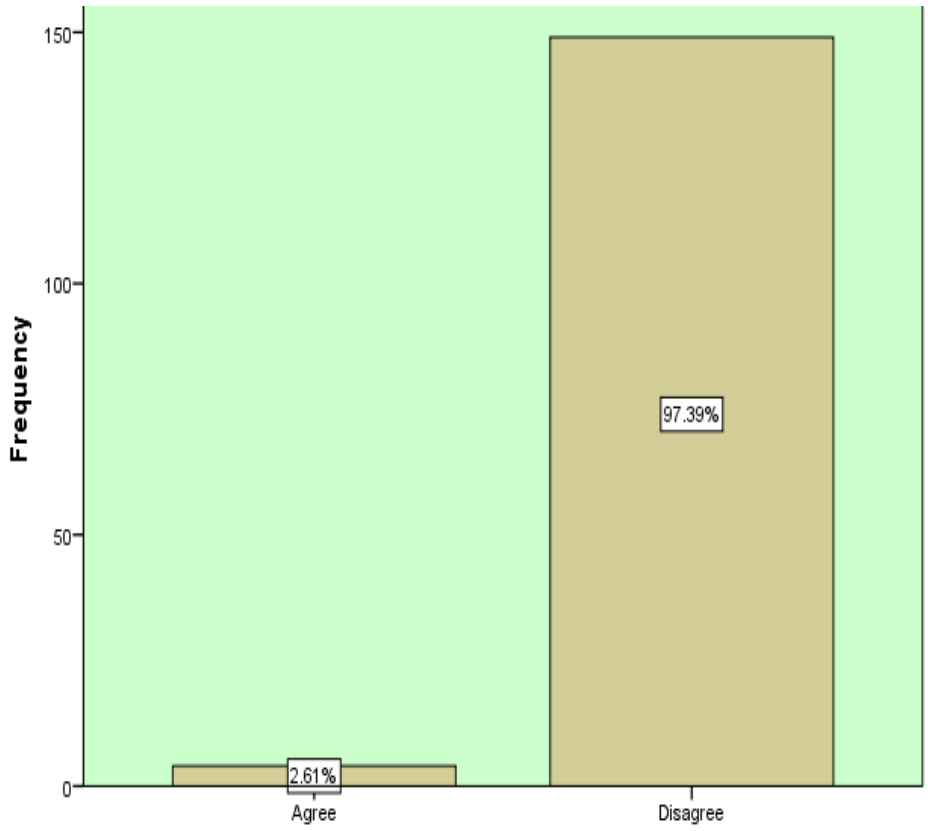

Figure 4.4 Participants response to peer pressure

Figure 4.4 above shows the majority 151 (97.4%) of the respondents disagreed that they succumb to peer pressure not to use condoms while only 4 (2.6%) of the respondents agreed to succumbing to peer pressure.

4.5 Sexual practices

4.5.1 Types of sex practiced:

Table 4.11 Table showing respondents sexual practices

(N=153)

Variable	Frequency	Percent
What kind of sex do you practice?		
Anal sex	2	1.3
Oral sex	1	.7
Penetrative vaginal sex	150	98.0
Total	**153**	**100.0**

Regarding the type of sex participants engage in, 150 (98%) indicated penetrative vaginal sex only, whilst the other 2 (1.3%) mentioned anal sex and only 1 (0.7%) reported oral sex.

4.5.2 Incidence of regular sexual partners:

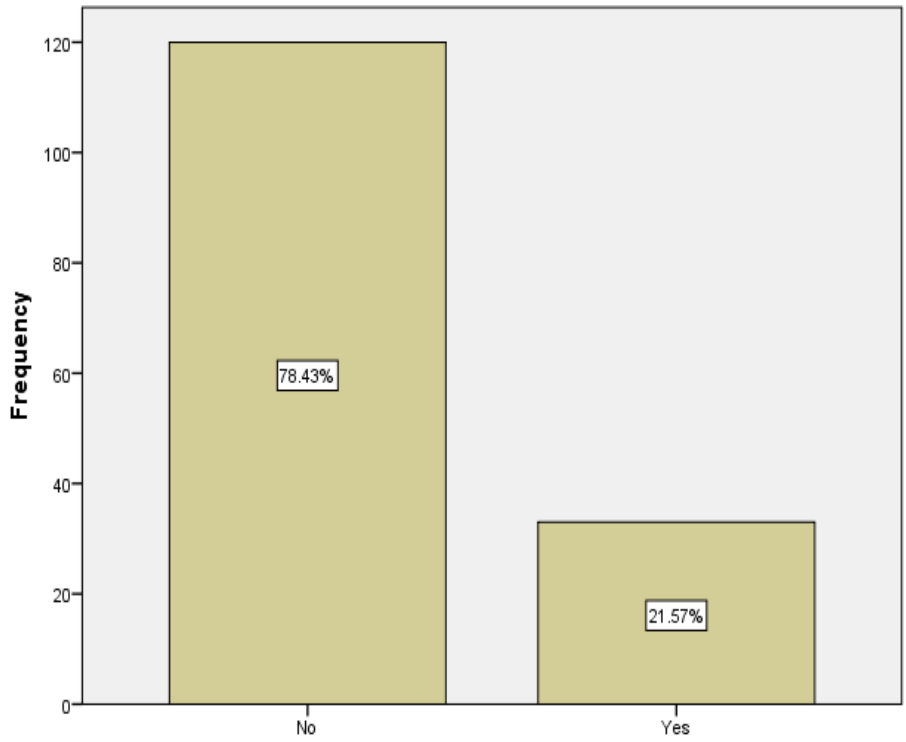

Figure 4.5 Incidence of regular sexual partners

Regarding participants having regular sexual partners, 120 (78.4%) had no regular sexual partners while 33 (21.6%) had regular sexual partners**.**

4.5.3 Sexual practices with regular partners:

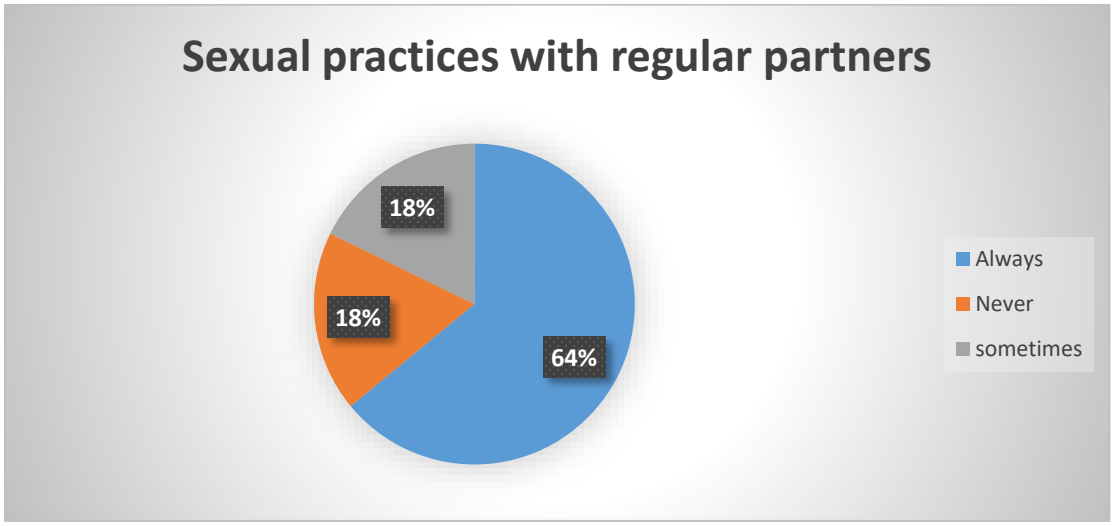

Figure 4.2 Sexual practices with regular partners

On sexual practices with regular partners, figure 4.6 above shows only 33 (21.6%) participants who reported having regular partners responded to this question and 21(64%) participants practise protected sex always with their regular partners, 6 (18%) sometimes practised protected sex and 6 (18%) never practised protected sex with their regular partners.

4.5.4 Number of sexual partners:

Table 4.12 Number of sexual partners in the preceding 2 weeks

(N=153)

Variable	Frequency	Percent
Number of sexual partners in the preceding 2 weeks		
1	2	1.3
2-3	26	17
More than 3	125	81.7
Total	**153**	**100.0**

Table 4.12 above shows the number of sexual partners in the preceding months of the research. Finding show that most of the participants 125 (81.7%) had engaged in sexual intercourse with more than three different partners in the past 2 weeks preceding the assessment and 26 (17%) had two to three different partners. The remaining 2 (1.3%2) had only one sexual partner in the past 2 weeks.

4.5.5 Condom use:

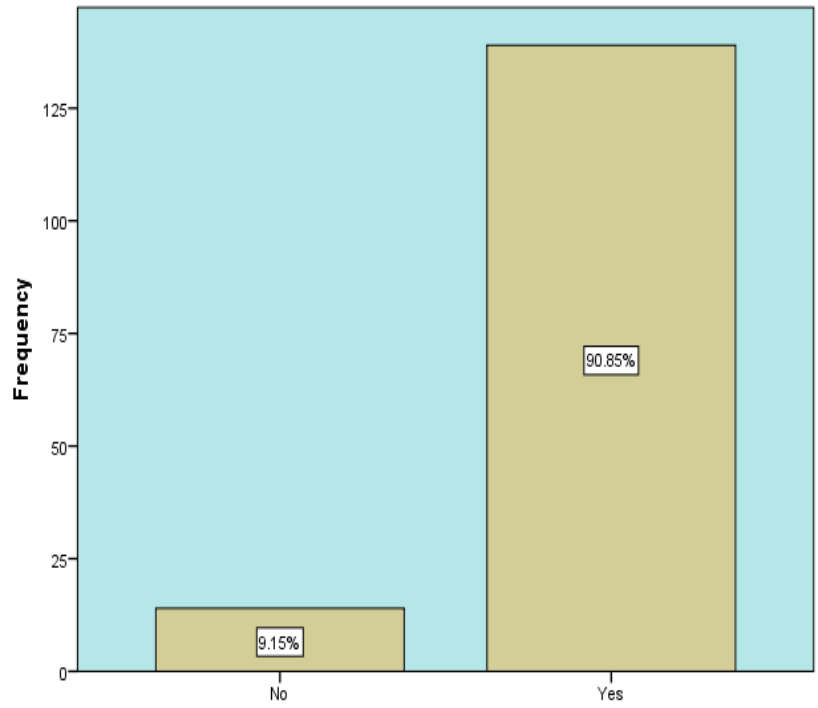

Figure 4 6 Graph showing condom use practices by respondents.

Participants were asked if they always used condoms during coitus. The majority 139 (90.85%) agreed to condom use always and the remaining 14 (9.15%) were not using condoms always.

4.5.6 Incidents where a condom was not used:

Table 4.13 Frequency of non-condom use

(N=153)

Variable	Frequency	Percent
How many times did you not use a condom with non-regular clients?		
More than once	10	6.5
Once	4	2.6
Total	14	100.0

Out of 14 participants representing 9.15% of the total participants 10 (6.5%) had not used a condom once in the 2 weeks preceding the assessment and only 4 (11.8%) had not used condoms more than once in the 2 weeks preceding the assessment.

4.5.7 Reason for not using condoms:

Table 4.14 Reasons for not using the condom

(N=153)

Variable	Frequency	Percent
Reason for not using a condom?		
I trust my client	11	7.2
Was offered more money	3	2.0
Total	**153**	**100.0**

With respect to reasons for non-condom use, 11(7.2%) participants had not used a condom because they trust their client while the remaining 3 (2.0%) had been offered more money. None of them cited PrEP, circumcision, and cleanliness of the men as the reasons for non-condom use.

4.5.8 STI's whilst on PrEP:

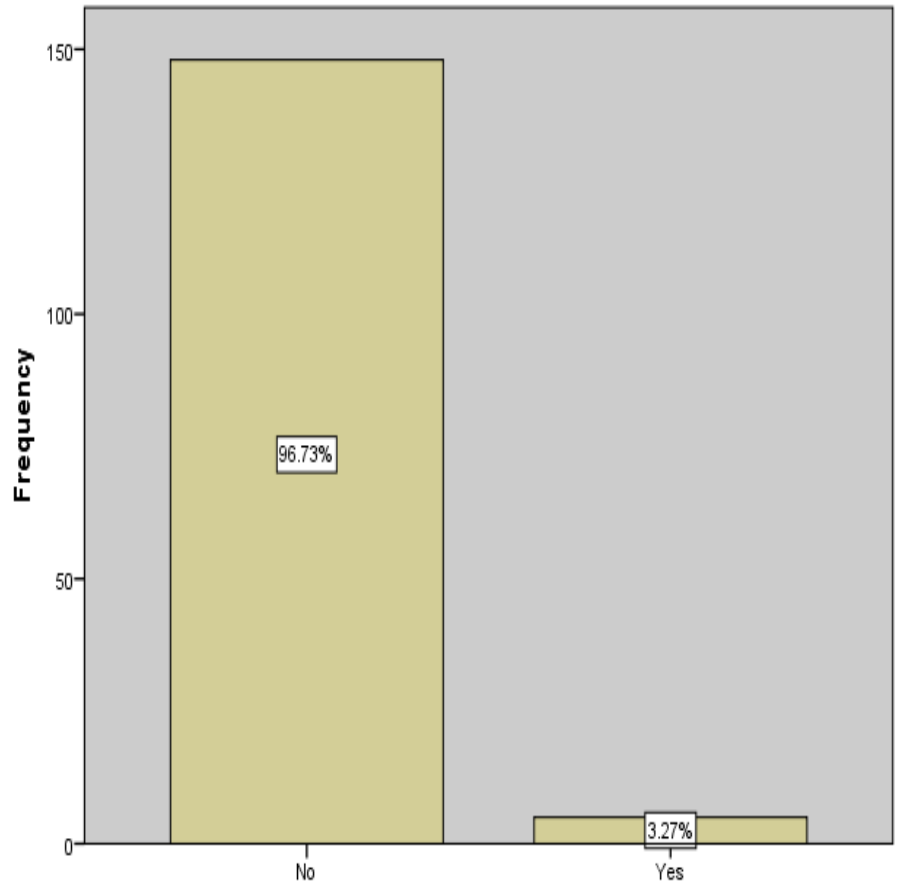

Figure 4.7 Participants infected with STIs while on PrEP

Figure 4.7 above shows the number of participants infected with STIs while on HIV pre-exposure prophylaxis. The majority 149 (96.7%) did not agree to having an STI whilst on HIV pre-exposure prophylaxis while the other 5 (3.3%) were infected during the period they have been on HIV pre-exposure prophylaxis.

Table 4.15 Distribution of respondent infected by STIs while on PrEP by residential area

(N=153)

Place of residence	Have you ever had an STI whilst on PrEP		Total
	No	Yes	
Mucheke A	56	1	57
Mucheke B	65	2	67
Mucheke C	14	0	14
Mucheke D	7	0	7
Other-Mbudzi	1	1	2
Other-Mucheke F	5	1	4
Total	**148**	**5**	**153**

Among the participants infected with STIs while on HIV pre-exposure prophylaxis, 2 out of 5 (40%) are residence of Mucheke B while Mucheke A, F and Mbudzi area each had one person each infected. None from Mucheke C and D

4.5.9 Unwanted pregnancies whilst on PrEP:

Table 4.16 Table showing unwanted pregnancies whilst on HIV pre-exposure

(N=153)

Variable	Frequency	Percent
Have you ever fallen pregnant, unplanned, whilst on PrEP?		
No	153	100.0
Yes	0	0.0
Total	**153**	**100.0**

Table 4.16 above shows all 153 (100%) of the respondents never had an unplanned pregnancy whilst taking HIV pre-exposure prophylaxis.

4.5.10 Missing a dose while on HIV pre-exposure prophylaxis.

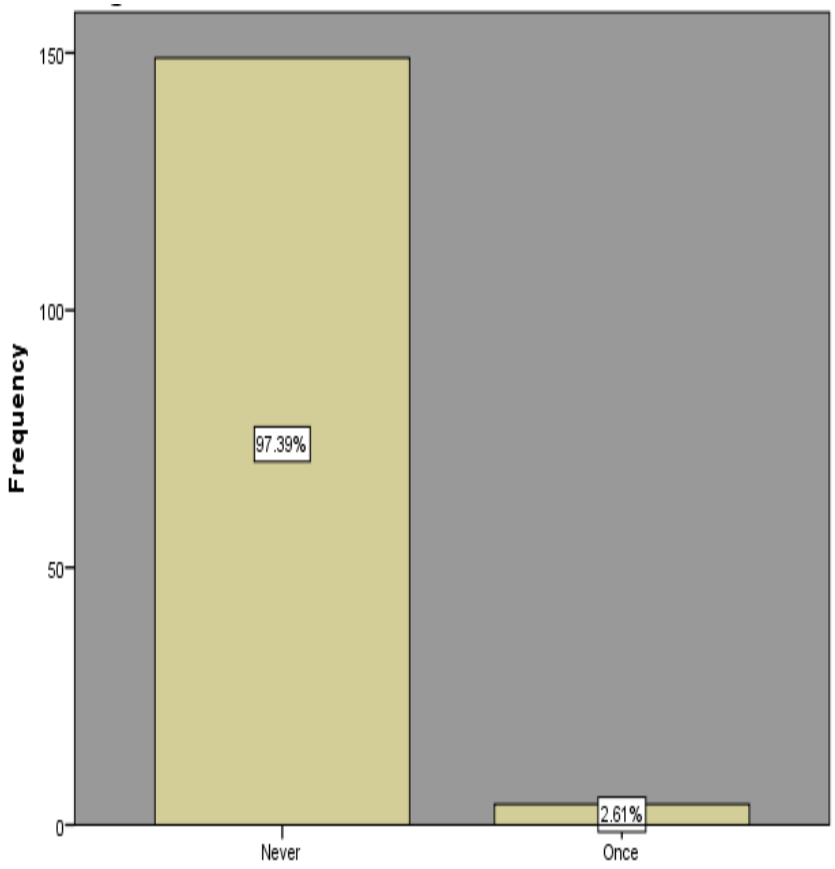

Figure 4.8 Participants who missed doses of HIV pre-exposure prophylaxis.

The figure 4.8 above shows the proportion of participants who missed doses of HIV pre-exposure prophylaxis. The majority 149 (97.39%) of the participants had never missed a dose during the previous 2 weeks preceding the assessment while only 4 (2.61%) missed a dose of HIV pre-exposure prophylaxis once. None of the participants missed two doses and above during the two weeks preceding the assessment implying that adherence is good.

4.5.12 Types of contraception used:

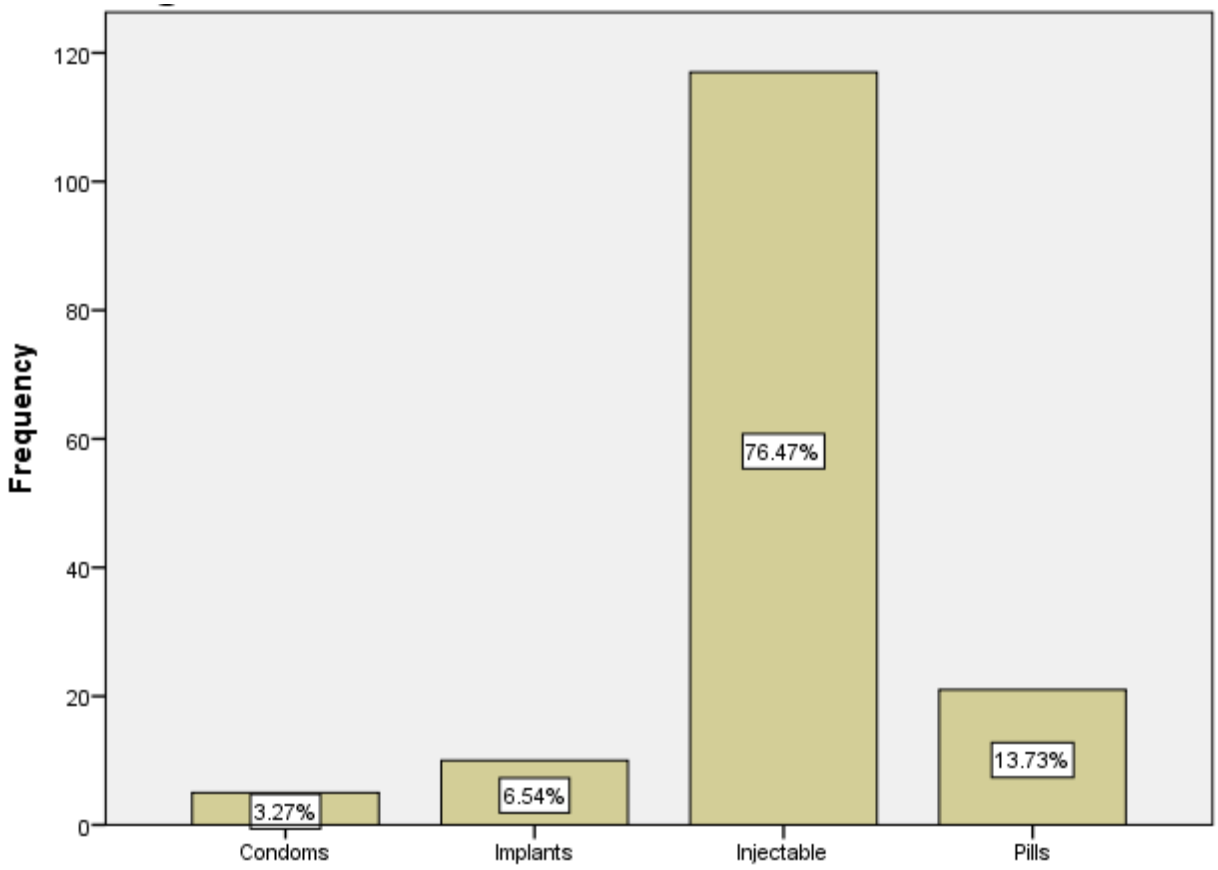

Figure 4.9 Graph showing types of contraception used by respondents

With respect to types of contraception used by the participants, the majority 148 (96.73%) were using dual forms of protection, that is, 10 (6.54%) condoms and implants, 117 (76.47%) condoms and 21(13.73%) injectable and condoms/oral pills., Only 5 (3.27%) indicated that they were using condoms alone.

CHAPTER 5

DISCUSSION, SUMMARY, IMPLICATIONS, RECOMMENDATIONS, LIMITATIONS AND CONCLUSION

5.1 Introduction

This chapter presents the summary of the findings discussed with reference to the research questions. The conclusions from this study were deduced in relation to the study objectives, which are

a) To assess knowledge on sexually transmitted infections among commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic in Masvingo

b) To assess attitude on sexually transmitted infections among commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic in Masvingo.

c) To explore on sexual practices of commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic in Masvingo.

The limitations of the study were also looked at and the researcher discussed the clinical implications in respect with nursing education, administration, and research. The purpose of this study was to explore the knowledge, attitudes, and practices about sexually transmitted infections among commercial sex workers in Masvingo who are receiving HIV pre-exposure prophylaxis as part of interventions to reduce HIV transmission among high-risk groups.

5.2 Summary of the Research

The focus of this study was to determine knowledge, attitude, and practices on sexually transmitted infections among commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic in Masvingo. The research study used a quantitative, cross-sectional research approach in which data was collected from commercial female sex workers who were on PrEP at Mucheke clinic in Masvingo. A purposive sampling method of 153 participants was identified and selected for the study. The Health Belief Model was used to guide the research questions, explain and support the findings of the study. Questionnaires were used to collect the data from the participants and the response rate was 100%.

The findings of this study revealed that 42.5% of the respondents were aged between 21-30 years and most participants 43.8% lived in Mucheke B. Majority of the participants 68% completed

secondary school education. Sixty four percent of the participants had over 3 years' experience working as commercial sex workers and majority, 83.7% were on HIV pre-exposure prophylaxis. for more than 6 months. With respect to income earned per month, 97.4% of the participants earned between 0 to 299 US dollars and sex work is the major source of income.

The female sex workers demonstrated some knowledge on STIs/HIV transmission, prevention and treatment. All 153 participants were aware that AIDS is caused by HIV, and that coughing, and sneezing cannot spread HIV and that anal sex can spread STIs. Regarding concentration of virus in saliva and tears, 98% correctly disagreed. The majority 98% of the participants knew that mosquitoes do not spread STI/HIV. Regarding HIV transmission through faeces, 96.7% knew that this is not HIV mode of transmission. A total of 149 participants knew that having multiple sexual partners increases the risk of contracting STIs. All participants 100% correctly indicated that latex condom use is a measure of STI/HIV prevention and condoms can prevent spread of genital warts All of the 100% also knew that washing genitalia with soap after sex does not prevent STI/HIV infection. The majority 98% correctly answered that penis withdrawal before ejaculation does not prevent STIs/HIV transmission. Relating to condom safety, the majority, 87.6% expressed that condoms do not make sexual contact completely safe. Regarding knowledge on signs and symptoms of STIs, the majority 90.8% knew that some STIs do not show signs and symptoms. All the participants indicated that PrEP is taken daily, and also that PrEP is not only taken after sex without a condom. They all knew that circumcised men can also spread HIV/STIs. The majority, 92.8% of the participants believe that prophets and traditional healer do not treat HIV. On genital ulcers 94.8%) knew that there is need to seek treatment even if a genital ulcer disappears. Ninety-seven comma four expressed that not all circumcised men are HIV negative and 96.7% knew that PrEP does not protect the transmission.

Regarding attitudes towards STIs/HIV and HIV pre-exposure prophylaxis, 100% agreed to taking daily and disagreed that it is difficult to use HIV pre-exposure prophylaxis and condoms at the same time. All participants also disagreed that HIV pre-exposure prophylaxis is just a project by the educated to test their medicine. On the effectiveness of HIV pre-exposure prophylaxis, 98.7% agreed that HIV pre-exposure prophylaxis is effective in preventing HIV infection. About 98.7%

disagreed that STIs/HIV is a curse from God. The majority 97.4% of the participants disagreed that they succumb to peer pressure not to use condoms.

Regarding the type of sex participants engage in, 98% indicated penetrative vaginal sex only, whilst 1.3% mentioned anal sex and 0.7% reported oral sex. The majority 78.4% participants agreed to having regular sexual partners**.** Out of 33 participants who reported having regular partners. 64% practices protected sex always with their regular partners. The other 18% sometimes practised protected sex and a similar proportion never practised protected sex with their regular partners. The study showed that 81.7% of the participants had engaged in sexual intercourse with more than three different partners in the past 2 weeks preceding the assessment. Regarding condom use. 90.85% participants agreed to a condom use always. The reasons cited for non-condom use were trusting their clients (7.2%) and being offered more money. The majority 96.7% participants disagreed ever having a sexually transmitted infections whilst on HIV pre-exposure prophylaxis. Among the participants infected with sexually transmitted infections while on HIV pre-exposure prophylaxis., most, 40% were residence of Mucheke B. None of the participants never had an unplanned pregnancy whilst taking HIV pre-exposure prophylaxis. The majority 97.39% of the participants had never missed a dose during the previous 2 weeks preceding the assessment while only 2.61% missed a dose of HIV pre-exposure prophylaxis. With respect to types of contraception used by the participants, only 3.27% used condoms alone while 96.73% are using dual forms of protection.

5.3 Discussion

5.3.1 Demographic characteristics

This study revealed that 42.5% of the respondents were aged between 21-30 years and lived in Mucheke B, which could be due to the fact that the research was conducted in their geographical area. The study showed that majority 68% participants completed secondary school which may account for high knowledge levels on sexually transmitted infections. Most 95.5% of the participants had over 3 years on HIV pre-exposure prophylaxis exposing them to repeat tutorials and counselling on STIs/HIV. The majority 97.4% earn between 0 to 299 United States dollars, which is far below the poverty datum line of US $575 per months suggesting poverty as a key driver for commercial sex work. (ZIMSTAT, 2024). This study showed that 91.5% of participants earned their income from sex work which is consistent with a study carried out by Bouey et.al

(2022) on the implications post-COVID-19 among street-based commercial sex workers in the United States of America, revealed sex work as the primary form of income.

5.3.2 Commercial sex workers knowledge:

This study revealed that commercial sex workers on HIV pre-exposure prophylaxis were generally knowledgeable on STIs/HIV, as over 90% answered all the questions correctly which is consistent with other studies carried out by Al-Gburi et. al (2023) and Bouey et.al (2022) in Baghdad and United States of America respectively. Results showed that all participants had above average basic knowledge on STI's/HIV and HIV pre-exposure prophylaxis as they all knew that latex condoms are a means of HIV prevention, and that HIV pre-exposure prophylaxis do not protect sexually transmitted infections transmission. This is consistent with a study carried out by Shibesh, et al (2023) which revealed that 77% of the commercial sex workers were aware that HIV pre-exposure prophylaxis do not prevent sexually transmitted infections.

The study results show that the majority 83.7% participants were on HIV pre-exposure prophylaxis for more than 6 months which is attributable to high knowledge levels as HIV PrEP platform exposes them to continuous knowledge sharing by peer educators and health professionals. Repeated interactions with peers and health professionals allow members to comprehend sexual health, STI/HIV and family planning issues to a greater magnitude hence accounting for high knowledge score/ comprehensive knowledge levels. In addition, the HIV PrEP project also offers opportunities for STI screening, repeated HIV testing, counselling, and adherence hence the demonstrated results.

Electronic media like televisions and radios were the most common sources of information (90.85%), and this concurs with some studies carried out by Ali et.al (2023) and Al-Gburi et., al, (2023) which found out that electronic media was the major source of information.

The participants demonstrated good knowledge on STI/HIV transmission as all 100% of the participants were aware that AIDS is caused by HIV, coughing and sneezing cannot spread HIV and anal sex can spread sexually transmitted infections. This result is consistent with a study carried out in Kariba by Dhliwayo (2019) which shows that commercial sex workers acquire a lot of knowledge during health education and counselling sessions. The majority of the participants also answered correctly on the following knowledge questions; concentration of virus in saliva and

tears, (98%), mosquitoes do not spread STI/HIV (98%) and transmission through faeces (96.7%). This finding is consistent with results of study carried out by Ali et, al (2023) in Chandigarh, India which revealed that 90.5% of the participants were aware about all modes of transmission.

Consistent with a study carried out among Baghdad undergraduate students by Al-Gburi et, al in 2023, this study revealed that the majority 97.4% of the participants had correct knowledge regarding the risk associated with having multiple sexual partners in increasing chances of HIV transmission. This implies that the other 2.6% are at risk of contracting STIs/ HIV through risk behaviour of having multiple sexual partners.

Regarding sexually transmitted infections prevention, the participants of this study demonstrated very good knowledge as all 100% correctly indicated that latex condom use is a measure of STIs prevention, condoms can prevent spread of genital warts and washing genitals with soap after sex do not prevent sexually transmitted infections. These findings concur with results from other studies conducted in Chandigarh, India, and Baghdad by Ali et, al (2023) and Al-Gburi et, al (2023) respectively which revealed that more than 90% of the study participants mentioned condom use as a measure of preventing STI/HIV. However, this result is contrary to the findings of a community-based HIV prevention intervention study carried in South Africa by Shamu, et, al (2020) which showed that less than half (44.7%) had correct knowledge of HIV prevention.

Misconceptions by 12.4% of the participants that condoms are completely safe and withdrawal before ejaculation prevents STI/HIV transmission revealed lack of comprehensive knowledge thus increasing their risk of transmitting STIs/HIV. Similarly, a study carried out in Kariba district. Zimbabwe by Dhliwayo (2019) demonstrated poor knowledge on withdrawal before ejaculation as over thirty three percent (>33%) were wrongly informed.

Regarding signs and symptoms of sexually transmitted infections, the study revealed that 9.2% incorrectly thought that all sexually transmitted infections have visible signs and symptoms. Similarly, in a cross-sectional study to describe knowledge on sexually transmitted infections among commercial sex workers on HIV PrEP in Kariba district, Dhliwayo (2019) reported poor knowledge on STIs signs and symptoms as over a third of the participants could not describe signs and symptoms of STIs. This study also revealed that 5.23% sees no need for seeking treatment if

the genital ulcer disappears. This lack of knowledge implies that there is risk of spreading the infection when the ulcer disappears without treatment.

The study revealed high knowledge levels on treatment compliance as all 153 (100%) participants indicated that HIV pre-exposure prophylaxis is taken daily and not only after sex without a condom. However. The study interestingly revealed that 7.2% of the participants wrongly believes that the traditional healers and prophets can treat STIs/HIV which can lead to poor health seeking behaviour and poor compliance.

This study also shows that 3.3% of the participants have wrong perceptions that HIV pre-exposure prophylaxis protect them from acquiring STIs thus putting them at risk of transmitting STIs/HIV.

5.3.3 Commercial sex worker's attitude:

This study demonstrated positive attitude of commercial sex workers on HIV pre-exposure prophylaxis towards HIV PrEP as all 100% participants agreed to taking HIV pre-exposure prophylaxis daily, disagreed that it is difficult to use HIV pre-exposure prophylaxis and condoms at the same time and they do not believe that HIV pre-exposure prophylaxis is just a project by the educated to test their medicine. Most commercial sex workers agreed to HIV pre-exposure prophylaxis being an effective pharmacological means of preventing HIV hence bolstering HIV pre-exposure prophylaxis uptake. This finding was in tandem with studies that had been conducted in Zimbabwe by Moyo and Nunu (2023), Gombe, at al (2020) and Nhamo et al (2022) to explore factors associated with uptake and continuation of oral pre-exposure prophylaxis.

A few sex workers, (1.3%) believed HIV was a curse from God. This demonstrates negative attitude among the participants and can be explained by low knowledge levels on transmission routes together with risk factors for acquiring HIV.

The study shows that the majority 97.4% of the participants do not succumb to peer pressure on not using condoms while the other 2.6% agreed to succumbing to peer pressure increasing their exposure to STIs/HIV. These results concur with findings of a study carried out in Kariba district by Dhliwayo (2019) which revealed that 2.7% participants strongly agreed to succumbing to pressure not to use a condom. Also results of this study revealed that about 4.6% of the female sex workers worry about what others think of them when on HIV pre-exposure prophylaxis implying that they are prone to peer pressure.

5.3.4 Female sex workers sexual practices:

A small proportion of female sex workers on HIV pre-exposure prophylaxis (1.3%) engaged in both anal sex and the traditional penetrative vaginal sex while only 0.7% reported oral sex. This can be attributed to new sexual behaviours/ trends. In addition, both anal and oral sex likely offers more income to the sex workers hence fulfilling the main purpose of the trade. Regarding regular partners, a significant proportion of commercial sex workers (21.6%) had regular sexual partners which is almost similar to results of study carried out in India by Ali et al, (2023) which revealed that about 27% of the participants had regular sexual partners. This demonstrates existence of a social contract among sex workers and the desire to belong or and to have family.

5.3.4.1 Sexual practices with regular sexual partners:

Of the 33 participants who reported having regular sexual partners, 13.7% always practised protected sex with their regular partners. The rest used condoms intermittently or never. Review of a similar study by Shamu et., al (2020) depicts high levels of non-condom use by 27,4% participants thus concurring with this study results. This demonstrates a false sense of trust between both partners which can be attributed to perceived risk reduction or behavioural disinhibition purportedly offered by HIV pre-exposure prophylaxis.

5.3.4.2 Partners in previous week:

Results of this study revealed that the majority 91.7% had been exposed to 3 or more different non-regular sexual partners in 2 weeks preceding the assessment while none of them reported having no sexual activity. This finding concurs with a study carried out by Assefa A et. al (2021) in Ethiopia which revealed a high median number (4) of sexual partners per week by FSWs, demonstrating multiple concurrent partners as in my setting. This is in tandem with sex work as more sexual activities with different clients provides greater opportunity to earn more income. However, this demonstrates high chances of having multiple concurrent sexual partners which pose a great risk of acquiring STI's/HIV (UNAIDS, 2020).

5.3.4.3 Condom use:

Though this study revealed high condom use-90.8% among commercial sex workers on HIV pre-exposure prophylaxis, a significant proportion (9.15%) demonstrated risk taking behaviour by not using condoms always in the 2 weeks preceding the assessment. Relating to incidence of not using condoms, 11.8% had not used condoms more than once in the 2 weeks preceding the assessment. Various explanations could be postulated regarding this behaviour, like being offered more money for condomless sex, and perceived protection offered by HIV pre-exposure prophylaxis.

5.3.4.4 Reasons for not using condoms:

Eleven percent (11%) of the respondents who engaged in unprotected did so because they trusted their clients while 2% had been offered more money. This finding is consistent with a study conducted by Dhliwayo (2019) in Kariba district which revealed that 61.7% of commercial sex workers did not use condoms because they had been offered or desired more money. In a similar study conducted in Nigeria, Ogunyemi and Osanyin (2020) revealed that commercial sex workers may value monetary profit over their own safety thus engage in unprotected intercourse with higher-paying clients. This may indicate that the primary purpose for sex work is to earn a living and thus the negative consequences of risks decisions are not considered immediately. None of them cited HIV pre-exposure prophylaxis, circumcision, and cleanliness of the men as the reasons for non-condom use.

5.3.4.5 Incidence of STI's whilst on HIV pre-exposure prophylaxis:

This study showed that 3.3% of commercial sex workers in the study had contracted a sexually transmitted infection whilst on HIV pre-exposure prophylaxis project, this can be attributed to exposure to multiple sexual partners, and not using condoms consistently. It was however encouraging that (96.7%) disagreed ever having an STI whilst on HIV pre-exposure prophylaxis demonstrating the benefits of continued education offered during HIV pre-exposure prophylaxis refill and counselling visits.

5.3.4.6 Unwanted pregnancy whilst on HIV pre-exposure prophylaxis:

None of the participants had at one point had an unwanted pregnancy whilst taking HIV pre-exposure prophylaxis despite significant incidence of condomless sex reported in this study. In contrast, Dhliwayo (2019) revealed that 4.7% participants fell pregnant while on HIV pre-exposure

prophylaxis in Kariba district. This implies high use of family planning methods other than condoms in my study area.

5.3.4.7 Types of contraception:

Findings show that all the participants used condoms although consistency was a sticky issue. This is essential to prevent STI's/HIV, and pregnancy, all of which are relevant to commercial sex workers because they are at high risk of all. The majority, 96.73% used dual contraceptive methods that is condoms plus either oral contraceptives, injectable or implants. This finding is commendable as they are covered in case of failure of one that is in case of condom breakage or failure of the other. This is the WHO recommended contraceptive choice for high-risk clients. On the contrary, 33% used condoms only possibly due to lack of comprehensive knowledge or due to hormonal side effects of the other contraceptive options as the clinic did not provide non-hormonal methods.

5.4 Conclusion

Comprehensive knowledge, positive attitude and safe sexual practices are key fundamentals required by commercial sex workers on HIV pre-exposure prophylaxis to prevent acquisition of STIs/HIV acquisition and unwanted pregnancies. HIV pre-exposure prophylaxis has added to this package but failure to comprehend can pose heightened risk of sexually transmitted infections and unwanted pregnancy. Commercial sex workers' knowledge of STIs/HIV was determined by several factors which include among others, level of education, duration on HIV pre-exposure prophylaxis platform. Good knowledge almost always translated to positive attitude towards HIV pre-exposure prophylaxis. However, good knowledge did not directly translate to safe sexual practices such as reduced sexual partners, correct, consistent condom uses and pregnancy prevention. Rather other factors such as need for money, desire for money and trusting the clients determined sexual practices. Some commercial sex workers believed HIV was a curse from God thus develops negative attitude towards HIV pre-exposure prophylaxis. Anal and oral sex are slowly being adopted into our local sex practices although still low. The greater majority of commercial sex workers had regular sexual partners with whom they hardly practiced protected sex with. This poses a great risk of STI/HIV acquisition for the partners due to multi-concurrence of partners. Commercial sex workers on HIV pre-exposure prophylaxis repeatedly engaged in condomless sex with regular and non-regular clients influenced by desire for money and trusting

the clients. In addition, misconceptions that condoms are completely safe and withdrawal before ejaculation prevents STI/HIV transmission pose commercial sex workers at risk of acquiring the infection. The acquisition of STI's by commercial sex workers on HIV pre-exposure prophylaxis revealed the non-protective effect of HIV pre-exposure prophylaxis towards sexually transmitted infections. Adoption of dual contraceptive methods is not universal among commercial sex workers on HIV pre-exposure prophylaxis, demonstrates lack of knowledge on perceived benefits.

5.5 Recommendations:

5.5.1 Education

1. Sexually transmitted infections pose a major public health threat particularly in developing countries. It is important that sexually transmitted infections education be included in the educational curriculum starting at primary education to cater for early dropouts. It should cover both basic education and emerging trends including HIV pre-exposure prophylaxis.
2. Continued counselling is key to successful uptake and effectiveness of HIV pre-exposure prophylaxis, educating clients on risk compensation and behavioural disinhibition at each refill visit indirectly ensuring adherence, and avoidance of high-risk behaviour.
3. Health talks at every refill should include sexually transmitted infections prevention methods to dispel myth and misconceptions.

5.5.2 Sexual practices

1. The mainstay of preventing pregnancy and sexually transmitted infections including HIV among high-risk groups is use of dual protection (barrier method i.e., condom plus another method) to cater for condom failure and or other forms of contraceptive failure. This study recommends education and promotion of dual contraception among high-risk groups.

5.5.3 Policy

2. Most African countries including Zimbabwe criminalize or do not recognize anal sex, hence gross or total unavailability of condoms meant for anal sex particularly in the public sector. Anal sex poses a greater risk of acquiring STIs/HIV. However, compounded by temptation of more potential earnings it poses great risk hence the Ministry of Health

should avail condoms specifically meant for anal sex thus reducing breakages or and exposure.

3. A major step in enhancing knowledge, attitude, and safe sexual practices among commercial sex workers involves acceptance of sex work as profession and part of growing trends. To achieve this, this study proposes to decriminalise sex workers, this then entails public seminars, open air screening (STIs/HIV), targeted towards high-risk groups.
4. Legalizing sex work allows for regulation of the sex industry as in developed countries where escorts are mandatorily screened for STIs/HIV and managed accordingly. By regulating sex work, commercial sex workers can be educated freely, treated freely, operate freely and openly thus reducing risks associated with anonymity.
5. Most governments, including Zimbabwe, perceive sex work as immoral and insignificant hence most funding for such key populations is mainly from non-governmental organisations. This however threatens the sustainability of such programmes.

5.6 Limitations

There are some limitations of this study. These limitations were associated with using a limited and urban sample, which was not representative of the whole commercial sex workers in Masvingo, Zimbabwe. Furthermore, the data was collected from commercial sex workers on HIV pre-exposure prophylaxis platform which limits the generalizability of the results to other commercial sex workers. Selection bias was also a limitation as participants were drawn from Mucheke clinic only. Recall bias by participants may have also affected study results together with untruthful responses.

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Appendix B: Questionnaire

Part A: Demographic data

1. Identity number:

2. Age: …… years

3. Residential area Mucheke A [ ], Mucheke B [ ], Mucheke C [ ], Mucheke D [ ] Other--.(specify)

4. Level of education. Primary: [ ] Secondary: [ ] High school [ ] Tertiary [ ]

5. Duration in sex work. Less than 1 year [ ], 1 to 3 years [ ] ,More than 3 years [ ]

6. Duration as Masvingo resident. Less than 1 year [ ], 1 to 3 years [ ] ,More than 3 years [ ]

7. Duration on PrEP . Less than 3months [ ],3 to 6 months [ ],More than 6 months [ ]

8. Monthly income in USD. 0-299 [ ], 300-599 [ ], 600-89 [ ], More than 900 [ ]

9. Sources of income Sex work [ ], Other forms of employment [ ], Partner/spouse [ ]

10. Do you have access to television or radio STI/HIV messages. Yes [ ], No [ ]

Part B- Knowledge about STI/HIV

Please **TICK ONE** option only

11. AIDS is caused by HIV? Yes [ ], No [ ]

12. The HIV virus is found in high concentration in saliva, tears and urine? Yes [ ], No [ ]

13. Mosquitoes can spread HIV? Yes [ ], No [ ],

14.Coughing and sneezing can spread STI/HIV/AIDS? Yes [ ], No [ ]

15. Contact with faeces can spread STI/HIV/AIDS? Yes [ ], No [ ]

16. Multiple sex partners increases the risk of contracting STI/HIV/AIDS? Yes [ ], No [ ]

17. Anal sex does not spread STIs Yes [ ] , No [ ]

18. If a man withdraws his penis before ejaculation it prevents from HIV/ STIs

Yes [ ], No [ ]

19. The use of latex condoms when engaging in sexual intercourse is a measure of HIV infection prevention Yes [ ], No [ ]

20. Condoms make sexual contact completely safe? Yes [ ], No [ ]

21. A person can prevent getting STIs by washing genitals with soap immediately after sex Yes [ ], No [ ]

22. Condoms prevent spread of genital warts Yes [ ] , No [ ]

23. All STIs have visible signs and symptoms Yes [ ], No [ ]

24. Zimbabwean prophets and/or traditional healers can treat STIs and HIV/AIDS Yes [ ], No [ ]

25. There is no need to seek treatment if a genital ulcer disappears Yes [ ], No [ ]

26. You take PrEP only after sex without a condom Yes [ ] , No [ ]

27. It is ok skip PrEP doses once in a while Yes [ ] , No [ ]

28. PrEP also offers protection from STIs Yes [ ], No [ ]

29. All circumcised men are HIV negative Yes [ ] , No [ ]

30. Circumcised men cannot spread or acquire HIV or STIs Yes [ ], No [ ]

Part C: Attitude on STI/HIV Place all . the items in a table and they tick

Characteristic	Agree	Disagree	Don't know
31. I take PrEP daily			
32. I think PrEP works			
33. I believe PrEP is just a project by the educated to test their medicines and make money of sex workers.			
34. HIV is a curse from God for bad behavior			
35. I succumb to peer pressure not to use of condom or have unprotected sex			
29. I worry about what others think if I am on PrEP.			
30. It is difficult to use PrEP and condoms at same time			

Part D: Sexual Practices

31. What kind of sex do you practice? **(More than one answer accepted)**

a) Penetrative vaginal sex [ ],

b) Penetrative anal sex [ ],

c)Oral sex [ ]

32. Do you have a regular sexual partner?

a) Yes [ ],

b) No [ ]

33. If yes, do you practice protected sex with your regular partner?

a) Always [ ],

b) Sometimes [ ],

c) Never [ ]

34. How many different partners have you had sex with in the last 2 weeks?

a)1 [ ],

b) 2-3 [ ],

c)More than 3 [ ]

35. Did you use a condom always?

Yes [ ],No [ ]

36. If no, how many times did you not use a condom with non-regular clients?

a) Always [ ],

b) Once [ ],

c) More than once [ ]

37. What was the reason for not using a condom?

a) Because I am on PrEP [ ],

b) I Was offered more money [ ],

c) I trust my client [ ]

d)The client was clean and well kempt [ ],

e) The client was circumcised [ ]

38. Have you ever had an STI whilst on PrEP (vaginal discharge, itchiness, ulceration)

a) Yes [ ],

b) No [ ]

39. Have you ever fallen pregnant, unplanned, whilst on PrEP

a) Yes [ ],

b) No [ ]

40. How many days in the last 2 weeks have you missed a dose of PrEP

a) Never [ ]

b) Once [ ],

b) Twice [ ],

c) Three times or more [ ]

41. Which type of contraception do you use **(more than one option accepted)**

a) Condoms [ ],

b) Pills [ ],

c)Tubal ligation [ ],

d) IUCD [ ],

e) Implants [ ],

f) Injectable [ ],

g) None [ ]

Appendix B: Informed Consent

Background of Study

My name is **Melody Nyengerai**, a student from the Bindura University of Science Education fulfilling a Bachelor of Science Honours Degree Nursing Science (Nursing Education). I would like to invite you to take part in the study aimed at assessing knowledge, attitudes and sexual practises among commercial sex workers receiving HIV pre-exposure prophylaxis at Mucheke clinic, Masvingo.

Purpose and Design

The study aims to fill in the existing gaps on STI/HIV knowledge among female sex workers who are receiving HIV pre-exposure prophylaxis. The study will help policy makers and funding agencies concerned with providing HIV pre-exposure prophylaxis come up with various policies, initiatives, and strategies to prevent and improve sexually transmitted infections care among commercial sex workers. The study findings will also add to the body of knowledge on how commercial sex workers on HIV pre-exposure prophylaxis perceive sexually transmitted infections.

Study Procedures

I am interested in talking to you because I know you will provide me with necessary information on the research. If you agree to take part in this one-on-one interview, I will ask you questions about STI's/HIV and pre-exposure prophylaxis. Feel free to share with me your own thoughts and experiences in this area. The interview will last between 30 minutes and an hour. At the end of the study, I will put down your answers together with those from all the other people I will talk to and make a report. In the report, it will not mention names.

Confidentiality

I will not share any personal information about you with anyone. Any notes with your name will only be accessible to me and will be kept in a locked office. All personal information that you share with me will be kept secret. Any report that will be written will not use your name or identify you personally. I will do all I can to keep your own answers private, I will not tell you any information that I collected from other respondents.

Possible Risks

Some of the topics in the interview may bring out your weaknesses or make you uncomfortable. Feel open to say any discomforts about this study; you may leave some of the questions in the questionnaire you may feel uncomfortable with. You may also refuse to participate in any part of the interview and leave the interview at any time. If you become distressed or uncomfortable during the interview, you may stop at any time.

Benefits

There is no direct benefit to you from participating in this study. However, the information gained from the study may provide information that is very important for the community, the Ministry of Health, and other stakeholders to provide better sexual health services simultaneously preventing new sexually transmitted infections.

Costs

There will be no cost to you because of taking part in this study.

Voluntary Participation

It is your decision to participate or to refuse taking part in this study.

Withdrawal from the Study

You may choose not to enter the study or withdraw from the study at any time without loss of benefits entitled to you.

If you choose to stop being in the study at any time, it will not affect any benefits you would receive. You can stop participating in the study at any time.

Questions about the study

If you have any questions about the study at any time, you may ask me or call or contact me on +263773632162 or nyengeraim@yahoo.com. I will give you this information to keep if you need it later. Do you have any questions now?

Consent

Please tell me if you agree to participate in this study. Please take your time to decide whether to participate or not. If you agree, kindly sign below.

Name----------

Client Signature----------

Date----------

Appendix C: Informed Consent-(shona version)

Gwaro rebvumirano nevachapinda mutsvakurudzo

Tsanangudzo yetsvakurudzo

Zita rangu ndinonzi Melody Nyengerai, ndiri mudzidzi pachikoro chedzidzo yepamusoro chinova Bindura University of Science Education. Ndiri kuitawo tsvakurudzo pamusoro peruzivo, mafungire nemaitire evanita zvekutengesa bonde vari muchirongwa chekudzivirira kutapuriramwa kwehutachiona hweshuramatongo pachipatara cheMucheke.

Chinangwa chetsvakurudzo

Chinangwa chetsvakurudzo iyi ndechekuwana ruzivo rusati rozikamwa maererano nezve zvirwere zvepabonde kubva kumadzimai anoita zvekutengesa bonde vari muchirongwa chekudzivirira kutapuriramwa kwehutachiona hweshuramatongo. Izvi zvichabatsira vanogadzira magwaro emarapirwe kuti vanyotsobuda nemagwaro okudzivirira nekurapa zvirwere zvepabonde nemazvo. Izvi zvichawedzera paruzivo ruripo rwemaonere anoita zvekutengesa bonde maerarano nezvirwere zvepabonde.

Maitirwo etsvakurudzo

Ndasarudza kutaura nemwi nekuti ndinoziva kuti munokwanisa kundipa ruzivo runodiwa mutsvakurudzo ino.Kana mabvuma kupinda mutsvakurudzo, ndichakubvunzai mibvunzo inechekuita nezve zvirwere zvepabonde uye nechirongwa chekudzivirira kutapurirarwa chirwere cheshuramatongo. Sunungukai kundiudza zvamunofunga kana zvamunoziva maererano nenyaya idzi. Hurukuro idzi dzinotora maminetsi makumi matatu kusvika makumi matanhatu. Kana tapedza, mhinduro dzenyu dzichabatanidzwa nedzevamwe apo ndichazonyora zvabuda mutsvakurudzo dzese. Mugwaro razvabuda handizobudisi azita evanhu.

Tsindidzo

Mhinduro dzamuchandipa hadzisi kuzotaurira chero munhu zvake uye zita renyu harisi kuzobudiswa pajekerere kuti ndimi mazvitaurs. Zvinyorwa zvese zvine zita renyu zvichashandiswa neni chete uye zvichachengeterwa panokiyiwa. Zvinyorwa zvese zvetsvakurudzo hazvisi kuzobudisa zita renyu. Ndichaedza napose pandinogona kuti mhinduro dzamuchandipa dzisaratidza zita renyu uye handisi kuzokuudzai zvandawana kubva kune vamwe.

Njodzi Dzinogona Kuitika

Zvimwe zvatichakurukura zvinogona kukudzimbai. Sunungukai kutaura kana pane zvakudzimbai and makasunguka kusapindura mibvunzo inokudzimbai. Makasununguka zvakare kugumira hurukuro dzino panzira kana pane zvakudzimbai.

Zvamuchawana Mapinda Muhurukuro

Hapana chamuri kuzopiwa mushure mekupinda muhurukuro dzino asi ruvivo rwamuchatipa ruchabatsira nharaunda nebazi rehutano kuti ripe rubatsiro rwakakwana rwezvepabonde nezvirwere zvacho.

Muripo

Hapana zvachabhadhara kana mapinda mutsvakurudzo dzino.

Kusarudza kupinda muhurukuro

Makasununguka kuzvisarudzira kana kuramba kupinda mutsvakurudzo ino

Kubuda muhurukuro

Makasununguka kusarudza kusapinda mutsvakurudzo uye izvi hazvizokanganisi mararpirwe amagara muchita.

Mibvunzo nezve tsvakurudzo ino

Kana muine mibvunzo nezvetsvakurudzo ino chero nguva, munogona kundifonera kana kundinyorera pa +263773632162 kana nyengeraim@yahoo.com. Ndiri kukupai izvi kuitira kana mukazozvida mberi kunoinda.

Mungava nemubvunzo here pane zvatakurukura

Mvumo

Sunungukai kundiudza sarudzo yenyu uye torai nguva yenyu kufunga nezvazvo. Kana mabvuma kupinda, mundisainirewo pazasi apo.

Zita ramuzvina tsvakurudzo ----------

Runyoro rwamuzvina tsvakurudzo ----------

Zuva, mwedzi negore----------

Appendix D- Letter of Support from Health Sciences Department To District Medical Officer-Masvingo

DEPARTMENT OF HEALTH SCIENCES

P Bag 1020
BINDURA, Zimbabwe
Tel: 071 - 7531-6, 7621-4
Fax: 263 - 71 - 7534/6316

BINDURA UNIVERSITY OF SCIENCE EDUCATION

8 April 2024

The City Health Director
Masvingo City Council
Masvingo

Dear Sir/Madam

RE: PERMISSION TO CARRY OUT A RESEARCH - MELODY NYENGERAI:
RREGISTRATION NUMBER: B213791B

This is to confirm that **Melody Nyengerai** Registration number **B213791B** is a Part 3.2 Bachelor Honours Degree in Nursing Education (HBScNE) student at Bindura University of Science Education. She is required to carry out research as a partial fulfillment of Bachelor Honours Degree in Nursing Education programme.

Her research title is: **Knowledge, attitude and Practices on STIs Sexually transmitted Infections among female sex workers receiving Pre-exposure prophylaxis at Mucheke Clinic, Masvingo**

Your support in this matter will be greatly appreciated.

Kind regards

BINDURA UNIVERSITY HEALTH DEPARTMENT P BAG 1020 BINDURA ZIMBABWE

PP. A. Manwere

Ms.A.Manwere
CHAIRPERSON, HEALTH SCIENCES

Appendix E- Permission Letter from the District Medical Officer- Masvingo.

Telephone : +263-39-2266533 / 2261442
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ZIMBABWE

Reference:
E C No:
MINISTRY OF HEALTH & CHILD CARE
MASVINGO DISTRICT HEALTH EXECUTIVE
P O BOX 114
MASVINGO

11 April 2024

MRS. MELODY NYENGERAI
BINDURA UNIVERSITY OF SCIENCE EDUCATION

REF- PERMISSION TO CARRY OUT RESEARCH: MELODY NYENGERAI: REGISTRATION NUMBER B213791B

This letter serves to confirm you, Melody Nyengerai, a student at Bindura University of Science Education, have been granted permission to carry out research titled: **Knowledge, Attitude and Practices on Sexually Transmitted Infections (STIs) among Commercial Sex Workers Receiving HIV Pre-Exposure Prophylaxis (PrEP) at Mucheke Clinic in Masvingo** as a partial fulfilment of the Bachelor of Science Honours Degree in Nursing Science (Nursing Education). Data collection will be done between 15 April 2024 to 30 May 2024.

The research will contribute to the body of knowledge that will help the Ministry of Health and Childcare to design comprehensive, tailored care models that address both HIV and STIs. You will comply with all ethical issues as outlined in the research proposal.

Thank you for your support

ADMINISTRATION OFFICER
MASVINGO DISTRICT HEALTH OFFICER
11 APR 2024
P.O. BOX 114, MASVINGO
ZIMBABWE

DR. MUSKWE TP

DISTRICT MEDICAL OFFICER