

**EXPLORING EXPERIENCES OF THE MY PREP DECISION
SUPPORT TOOL AND COUNSELLING SERVICES AMONG
ADOLESCENT GIRLS AND YOUNG WOMEN IN JOHANNESBURG**

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A research report submitted to the Faculty of Science, University of the Witwatersrand, in partial fulfilment of the requirements for a Master's degree in Public Health: Social and Behaviour Change Communication (SBCC)

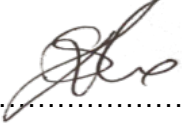


7 October, 2025

Supervisors: Dr Janine White and Dr Makhosazane Nomhle Ndimande-Khoza

DECLARATION

I, **Senziwani Ndlovu**, declare that this research report is my original work conducted without any assistance. It is submitted in partial fulfilment of the requirements for a Master's degree in Public Health, with specialisation in Social and Behaviour Change Communication (SBCC), at the University of the Witwatersrand, Johannesburg. This work has not been submitted previously for any degree or examination at any other university.

Signed:.....

On the.....**7th**.....day of**October**.....in 2025

DEDICATION

This research report is dedicated to all career women who are also mothers and may feel it is too late to charter a different trajectory in their careers or life. It's never too late as long as you are alive.

Just start!

ACKNOWLEDGEMENTS

I would like to appreciate the amazing support, encouragement received from my supervisors Dr Janine White and Dr Makhosazane Nomhle Ndimande Khoza. Your faith and trust in me were the wind I needed in my sails thorough out this research process. I am wiser and enlightened through your tutorship and stewardship and I will forever appreciate that.

My sincere gratitude also extends to Wits RHI for trusting me with the invaluable primary data used in this study. This research would not have been possible without all the hard work and input from the primary research, and I hope I have done justice to this study.

To my husband Vulindlela Lester Ndlovu, thank you for the financial support, for understanding when I was away from home for long periods and for taking over school runs and dinner duties among others. To my anchor; my children Vuyelwa Blanche Ndlovu and Nathi Lester Ndlovu thank you for all your words of encouragement, having so much faith in me, and forgiving me all the time mum missed your school events or was not around. I trust this is an example you will emulate and exceed one day.

Not forgetting my siblings, my sister Sylvia Dube, brothers Israel and Sidalubuhle Khumalo and mum, Mrs. Simelukufa Khumalo for your trust, faith in me and support. I treasure you all. Not forgetting fellow students, Nomthandazo Gwebu and Violet Bosire for all the encouragement, guidance and support.

We did this!

ABSTRACT

Introduction

Adolescent Girls and Young Women (AGYW) remain the most vulnerable group to HIV, accounting for 63% of all new infections in 2021 in the Sub-Saharan region. South Africa has the same challenge, with AGYW contributing almost a third of the number of People Living with HIV (PLHIV). The World Health Organization (WHO) recommends Pre-exposure Prophylaxis (PrEP) as an intervention for HIV prevention for at-risk groups such as AGYW. However, challenges of PrEP uptake persist among the group. Demand generation interventions on PrEP uptake are crucial in supporting hesitancy and decisional conflict AGYW may have. This study explored at risk AGYW's experiences of using a decision support tool (DST) called "My PrEP" and standard of care counselling, to understand the influence these services may have played in their PrEP uptake decision.

Methods

This is a secondary analysis of qualitative data collected in 2020 as part of a randomised controlled trial (RCT) on the effectiveness of the DST on PrEP uptake decision of AGYW visiting Jeppestown Clinic in Johannesburg. The trial consisted of two groups: group one received a tablet with "My PrEP" DST and standard of care counselling, and the other group received one with general health information as well as counselling. In-depth Interviews (IDI)s were conducted at the Wits RHI offices in Hillbrow, Johannesburg with AGYW from both control and intervention groups soon after their experience. IDI transcripts are the sources of this qualitative data. The current study focused on the group exposed to the DST and counselling.

Results

The study demonstrated a high level of acceptability for the DST among AGYW. Critical factors contributing to this acceptability included the tool's simplified language, visual aids, and its alignment with participants' lived experiences. The DST effectively facilitated informed decision-making by enhancing knowledge and supporting self-efficacy, resulting in more engaging healthcare interactions. Participants appreciated the independence and ethical considerations promoted by the DST, underscoring the importance of respecting autonomy in health interventions.

Furthermore, the study highlighted the significant role of dual support from the DST and counselling in enhancing AGYW's comprehension, self-efficacy, and decision-making

regarding PrEP uptake. The DST addressed informational gaps not covered by counselling and aided in personal and partner risk assessment. To maximise its impact, efforts should focus on improving mobile accessibility, multi-platform dissemination, and refining content to ensure it comprehensively provides information.

Conclusion

As PrEP demand generation for at-risk groups such as AGYW progresses, understanding leverage points for PrEP uptake interventions is essential in addressing HIV. While the use of DSTs is relatively new in Sub-Saharan Africa (SSA), countries like South Africa may particularly benefit from such innovations targeting at-risk groups.

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ABBREVIATIONS AND ACRONYMS

AGYW	Adolescent Girls and Young Women
AIDS	Acquired Immune Deficiency Syndrome
AYFS	Adolescent and Youth Friendly Service
ART	Antiretroviral Treatment
COVID-19	Coronavirus Disease of 2019
DoH	Department of Health
DST	Decision Support Tool
FTC	Antiretrovirals emtricitabine
HCP	Healthcare Provider
HIV	Human Immunodeficiency Virus
IDI	In-depth Interviews
IEC	Information Education and Communication
IPV	Intimate Partner Violence
MSM	Men who have sex with other men
NCD	Non-Communicable Diseases
PLHIV	People Living with HIV
POWER	Prevention Options for Women Evaluation Research
PrEP	Pre-exposure Prophylaxis
RCT	Randomised Control Trial
SSA	Sub-Saharan Africa
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infections
SW	Sex Workers
TDF	Tenofovir disoproxil fumarate
TFA	Theoretical Framework of Acceptability
UCSF	University of California, San Francisco
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations International Children's Emergency Fund
USA	United States of America
USAID	United States Agency for International Development
VMMC	Voluntary Medical Male Circumcision
WHO	World Health Organization

CHAPTER 1

Introduction

The Human Immunodeficiency Virus (HIV) has been a worldwide concern for over 40 years with immense investments made for extensive research to find a cure, treatment options, to ameliorate symptoms and avert fatalities related to the pandemic. This has resulted in seminal developments that have improved health outcomes and quality of life for people living with HIV (PLHIV).

This secondary study was embedded in a primary research project conceived to improve HIV prevention among adolescent girls and young women (AGYW). It explored how a decision support tool (DST) and counselling may have influenced the AGYW's decision to take up oral Pre-exposure Prophylaxis (PrEP). This qualitative inquiry evaluated their acceptability of the intervention. This chapter will highlight the background to the study including literature exploring different thematic issues related to the topic. It will also highlight the problem statement, justification of the research then research question, aims and objectives.

1.1 Background

HIV/AIDS was first clinically and biologically identified in the United States of America (USA) in 1980 and believed to have been in existence in Africa from the early 1970s (Williams *et al.*, 2000), but cases became fully documented from the 1980s (Kagaayi & Serwadda, 2016). Recent statistics highlight that the pandemic has resulted in the deaths of approximately 42.3 million people and about 39.9 million PLHIV globally (UNAIDS, 2024). The brunt of HIV/AIDS has been felt the most in sub-Saharan Africa (SSA). The SSA region, UNAIDS reports, accounted for 62% of new infections, with women and girls contributing 44% of new infections in 2023 alone (UNAIDS, 2024)

South Africa has world's highest number of PLHIV at over 7,6 million, notably AGYW being the most vulnerable group reflected through their contribution to almost a third (29%) of cases (George *et al.*, 2022) and twice more likely than males of the same age to be living with HIV (McClinton Appollis *et al.*, 2021; UNAIDS, 2022; Duby *et al.*, 2023). Although there is no clear definition of the AGYW age group, this term is used with reference to biological females aged 15-24 years by organisations such as UNICEF and UNAIDS (UNAIDS, 2016; Ferguson & UNICEF, 2021). There are a number of factors that contribute to AGYW's vulnerability to HIV than other demographic groups.

AGYW are biologically more vulnerable to HIV compared to their male counterparts, making

them an at-risk group (Mabaso *et al.*, 2018; George *et al.*, 2020; Murewanhema *et al.*, 2022). South African AGYW face unique barriers that increase their vulnerability to HIV/AIDS. Behaviours such as early sex debut, alcohol abuse, orphanhood, as well as general inequalities contribute to these challenges (Chimbindi *et al.*, 2018; Lewis *et al.*, 2022). Furthermore, economic deprivation at a household level, especially for child headed families, results in AGYW getting involved in transactional, age disproportionate relationships (Mampane, 2018; Ngidi *et al.*, 2024). An Age disproportionate relationship, colloquially referred to as “*Blessers*” or “*Sugar daddies*” in South Africa, is defined as a relationship where a man is 5 years or older than his female partner (Bajunirwe, Semakula & Izudi, 2020).

Age disproportionate relationships are often characterised by intimate partner violence (IPV), female partners are limited in their ability to negotiate safe sex leading to risky sexual behaviours and often involve alcohol abuse among other issues (Wamoyi *et al.*, 2016; Mabaso *et al.*, 2018; Duby *et al.*, 2023). A factor that further compounds this challenge is the limited comprehension of sexual and reproductive health (SRH) issues and HIV preventative measures by AGYW (Jonas *et al.*, 2020).

Despite these highlighted challenges, prevention methods introduced to ameliorate new HIV infections have been mostly targeted at males (Govender *et al.*, 2013; George *et al.*, 2014). This includes the male condom and Voluntary Medical Male Circumcision (VMMC), which often leave AGYW susceptible to their partner’s determination to use protection when having sex (Bajunirwe, Semakula & Izudi, 2020; Ngidi *et al.*, 2024). As part of measures to promote self-efficacy and female-controlled HIV prevention, oral PrEP as an intervention for HIV prevention for at-risk groups such as AGYW was recommended by the World Health Organization (WHO) (Rousseau, Katz, *et al.*, 2021).

Oral PrEP is an HIV prevention tablet that comprises of “antiretrovirals emtricitabine (FTC) and tenofovir disoproxil fumarate (TDF)” (Njuguna *et al.*, 2023: 2), and if taken consistently, this method has been proven to provide protection from HIV by over 95% (Rousseau, Katz, *et al.*, 2021; Skovdal *et al.*, 2022; Njuguna *et al.*, 2023a). Therefore, as AGYW are an at-risk group for HIV infection, focus in recent years on HIV prevention interventions remains on prioritising demand creation, that is to promote the demand, uptake and adherence of PrEP for at risk groups (Morton *et al.*, 2020; Pillay *et al.*, 2020; O’Rourke *et al.*, 2021; Skovdal *et al.*, 2022).

However, oral PrEP prioritisation is not without challenges. PrEP uptake among AGYW in

South Africa and other SSA countries is negatively affected by accessibility challenges, ill-treatment at health care facilities by health care providers (HCP)s, social stigma on oral PrEP being misconstrued as antiretroviral treatment (ART) and lack of support from interpersonal relationships, among other issues (Mboweni & Sumbane, 2019; McClinton Appollis et al., 2021; Celum et al., 2022; Murewanhema et al., 2022).

Therefore, to contribute to efforts in addressing these challenges, through the USAID-funded Prevention Options for Women Evaluation Research (POWER) project, a DST called “My PrEP” was developed by the POWER project team in collaboration with Dr. Christine Dehlendorf from University of California San Francisco (UCSF).

This secondary study sought to evaluate and understand insights shared by AGYW on their experiences of using the “My PrEP” DST, counselling and the influence these interventions may have had on their PrEP uptake decision.

The following section will delve into the literature review of the study to provide an in-depth understanding of the contextual background related to PrEP, DSTs and counselling.

1.2 Literature Review

1.2.1 AGYW’s PrEP Experiences

Although efforts have been made to ensure PrEP availability at South African healthcare facilities and in communities, uptake has been rather slow (Sekhon, Cartwright & Francis, 2017; Pintye et al., 2021; Heck & Karim, 2022). Several factors contribute to this low uptake, for instance AGYW, together with other at-risk groups, have poor judgement in assessing their risk (Wilton *et al.*, 2016; Meyer *et al.*, 2021). For AGYW, immaturity, the propensity to minimise issues that may define their risk to HIV are some determinants that lead to this miscalculation as highlighted in several studies (Celum *et al.*, 2015; Leah *et al.*, 2021; O’Rourke *et al.*, 2021; Pintye *et al.*, 2021).

South Africa was the first African country to roll out PrEP distribution in 2016, initially to key populations; female sex workers (FSW) and men who have sex with men (MSM) then later to tertiary education institutions then public health institutions (Pillay *et al.*, 2020). This roll out revealed limitations that need to be addressed to improve PrEP uptake, such as addressing anticipated stigma, poor risk assessment aptitude by clients, fear of side-effects among other things (Nakasone *et al.*, 2020; Pillay *et al.*, 2020; Butler *et al.*, 2023a)

These challenges have been expressed by AGYW, for example anticipated stigma; that regularly visiting a healthcare facility to collect medication, one may be perceived as taking anti-retroviral treatment (ART) (Pillay *et al.*, 2020; Rousseau, Katz, *et al.*, 2021). This stigma is compounded by the initial PrEP disbursement targeting of at-risk groups such as FSW and MSM, leading to avoidance of the intervention for fear of being classified as promiscuous (Morton *et al.*, 2020). Additionally, studies conducted in Nigeria and Malawi show a general dislike for PrEP pill burden leading to high attrition and poor adherence rates (Emmanuel *et al.*, 2020; Hill *et al.*, 2022).

Further barriers for PrEP uptake among South African AGYW include poor treatment by HCPs at healthcare facilities (Lanham *et al.*, 2021). Dominant perspectives indicate HCPs believe AGYW are too young to be having sex, that PrEP will promote promiscuity, sexually transmitted infections (STI) and unwanted pregnancies (Pleaner *et al.*, 2022). Evidence shows that South African HCPs particularly from public healthcare facilities perceive themselves as morality police who may deny a sexual and reproductive health (SRH) service to AGYW or berate them for seeking that service (Nakasone *et al.*, 2020). HCP attitudes are influenced by social and cultural norms that AGYW should not be indulging in sex (Pilgrim *et al.*, 2018; Mwongeli *et al.*, 2022; Pleaner *et al.*, 2022).

Facility-based barriers to PrEP have been noted as an obstruction to uptake in South Africa (Chimbindi *et al.*, 2018; Nakasone *et al.*, 2020). HCPs are often insufficiently trained to offer PrEP services and are overwhelmed in their daily activities, so that adding PrEP disbursement to their roles is something they are not keen to take on (Njuguna *et al.*, 2023). Research further revealed that training and capacity building on administering PrEP was done for a few staff members and when a client requests PrEP, they are referred to that trained staff member in the facility, often having to join another queue, resulting in AGYW opting to leave without receiving services (Pilgrim *et al.*, 2018; Mwongeli *et al.*, 2022). These barriers have negatively contributed to low PrEP uptake by AGYW. Despite these challenges, opportunities that can be harnessed to create PrEP demand and uptake for AGYW have been highlighted in different studies and will be explored in the following segment.

1.2.2 Factors Influencing AGYW PrEP Uptake Decision in South Africa

One of the notable barriers to PrEP uptake highlighted by AGYW is access (Pillay *et al.*, 2020; Lanham *et al.*, 2021; Nyblade *et al.*, 2022). A pilot study in Cape Town of a community-based

intervention called the Tutu truck sought to bring adolescent and youth friendly service (AYFS) that was colourful, with counsellors trained in offering services to youths and traveled to their locations, yielded positive results (Rousseau, Bekker, *et al.*, 2021). The truck was widely accepted by the youth due to its easy access by coming to them in the community, supportive environment that provided information in formats youth understood, as well as affable providers (Emmanuel *et al.*, 2020). Despite efforts to ensure access, several factors still influence AGYW's PrEP uptake and adherence.

At an inter-personal level, PrEP uptake by AGYW is influenced by several factors. The most prominent is social support from peers, guardians and partners. When AGYW take PrEP without hiding, this helps not only with the uptake but also their adherence (Emmanuel *et al.*, 2020; Pillay *et al.*, 2020; Rousseau, Katz, *et al.*, 2021). Positive peer influence is highlighted by research showing that when AGYW note friends and relatives their age take PrEP, this enhances their uptake decision (O'Rourke *et al.*, 2021; Rousseau, Katz, *et al.*, 2021). AGYW often rely on these inter-personal relationships for guidance and to seek information when contemplating PrEP uptake. This highlights that interpersonal relationships have a strong bearing on AGYW's decision, and these are some of the nuances that were noted when exploring AGYW of Johannesburg's decision to take up oral PrEP.

Information Education and Communication (IEC) materials such as fliers and posters informing them about PrEP influenced 87% of respondents in a South African study which sought to understand factors influencing the decision to take up PrEP for at-risk groups, including FSW and MSM (Pillay *et al.*, 2020). The study further uncovered that Interface with IEC material then motivated their trip to health centres to seek more information and initiate PrEP uptake. Additionally, social media platforms such as WhatsApp and social media influencers are noted as preferred channels for communication about PrEP by AGYW and have a strong association with its uptake and adherence (Shamu *et al.*, 2021; Mthimkhulu *et al.*, 2024). This underscores how awareness, particularly using preferred communication channels, helps ensure people have knowledge of services relevant to them, which may have a bearing on their decision-making process. The use of such innovative platforms such as DSTs to support health behaviours will be the focus in the next section.

1.2.3 DSTs in Healthcare

The advent of digital tools in health care have been touted as a great initiative for various reasons. DSTs have been extensively developed and used to support health professionals' work and proven to be effective to minimise mistakes, promote efficiency, assist in making decisions on diagnosis and treatment options swiftly and to allocate resources where they

are most needed (Ohno-Machado *et al.*, 1993; Kukafka *et al.*, 2009; Nader *et al.*, 2009).

DSTs benefit is aptly summarised as “[providing] patients with preventive services, treatment, and education; to promote disease tracking and monitoring; and to enable consumers to participate in health care services” (Yao *et al.*, 2022: 2). In a nutshell, DSTs enhance service delivery for HCPs and improve patient experience.

DSTs are important for HCPs to assist in overcoming obstacles such as time, which they identified as a major barrier when addressing patient needs related to PrEP (Njuguna *et al.*, 2023). Poorly resourced health delivery systems such as from public African healthcare facilities, can benefit from technology driven DSTs to address time constraints, training deficiencies and information gaps (Manyazewal *et al.*, 2021; Smuck *et al.*, 2021; Mistry *et al.*, 2022).

Patient-led DSTs have been developed and proven beneficial in supporting health care in under resourced communities (Elwyn *et al.*, 2013; Manyazewal *et al.*, 2021). For patients dealing with non-communicable diseases (NCDs), DSTs have been beneficial in ensuring self-monitoring and adherence to taking medication (Ngowi *et al.*, 2021; Timm Id *et al.*, 2022).

However, the implementation of digital tools in health care has not been without challenges due to endemic structural barriers that make digital accessibility as well as internet connectivity difficult (Friederici, Ojanperä & Graham, 2017). African communities grapple with low internet and mobile penetration while also confronted by intersectional determinants such as gender, income, education and rural/urban divide disparities that negatively impact on people’s ability to access and use DSTs (Fang *et al.*, 2019; Wang, Guo & Wu, 2021)

These barriers were particularly notable during the COVID-19 pandemic where many countries advised patients to download applications on their mobile phones for pre-screening before visiting a healthcare facility as in-person consultations were limited and clients used online portals for consultations (Ramsetty & Adams 2020). These developments were of course beneficial to connected communities but not those without mobile devices, highlighting disparities for communities with limited internet and mobile penetration. Hence, one scholar recommended that when decisions which proffer DSTs as an all-round solution are made, there is need to ensure that interventions are contextually responsive (Storeng *et al.*, 2021).

1.2.4 Counselling for PrEP Uptake

Although DSTs are sometimes used in isolation, better outcomes are reportedly realised when

used as complementary care for patients (Kukafka *et al.*, 2009; Garvelink *et al.*, 2019; Ramsetty & Adams, 2020). DSTs used in conjunction with counselling services addresses gaps in outcomes to ensure holistic care or something similar, is provided. There is extensive evidence demonstrating the effectiveness of counselling in health interventions (Mack *et al.*, 2014; Cowan *et al.*, 2016; Butler *et al.*, 2023; Chebet *et al.*, 2023; MacDonald *et al.*, 2023). It has been proven to be of great benefit for HIV patients trying to access services, to cope with living with the disease and to support one's PrEP information needs (Mourning & Sibindi, 2000; Baggaley *et al.*, 2012). However, when providing counselling services, there are different dynamics that need to be noted.

Counselling support that is sensitive to patient needs is important to reduce chances of patients shunning health facilities due to perceived bias or prejudice, to support patients who may feel unheard and to address barriers related to social and cultural norms hindering health seeking behaviour (Huynh-Nhu *et al.*, 2016; Desrosiers *et al.*, 2019). It is imperative that counselling is sensitive to patients' background such as language and culture as it reportedly results in a more positive engagement including being receptive to HCP support and recommendations (Huynh-Nhu *et al.*, 2016; Desrosiers *et al.*, 2019). Neglecting to adhere to these practices can result in serious consequences in healthcare delivery, occasionally causing misleading and harmful outcomes for patients (Torres *et al.*, 2020; Waselewski *et al.*, 2024).

One such example is articulated in a study conducted in Lesotho. Lesotho has a significant HIV burden and government is making strides to create demand and uptake of PrEP (Chebet *et al.*, 2023). However, this resulted in a rush to recruit patients without comprehensively explaining the service and support given (Chebet *et al.*, 2023). One client, the study further shows, thought she was HIV positive because she was tested and given medication (which was actually PrEP). Another indicated that they felt 'pressured' to uptake PrEP and decided to collect the tablets to later dispose of at home. These experiences demonstrate that counselling is very important as it may help bridge information gaps, misinformation and misunderstanding.

Counselling is important for PrEP demand creation to ensure that patients receive needed support. This support helps clients accurately assess their vulnerability, address language, cultural, or information gaps in understanding PrEP, and make informed decisions by providing comprehensive information about its benefits and side effects (Celum *et al.*, 2019; Sewell *et al.*, 2021; Heck & Karim, 2022). While HCPs may be inclined to initiate at-risk groups such as AGYW onto PrEP, it is more crucial and feasible to support clients through the

informed decision-making process via counselling.

Different studies have highlighted the importance of ensuring quality counselling services to improve health outcomes (Desrosiers et al., 2019; O'Connell & Criniti, 2021; Butler et al., 2023a). Recommendations made to improve quality of care include ensuring that client-provider interface is given sufficient time and at different stages from initial recruitment, support in disclosing one's status as well as for adherence (Mack et al., 2014; MacDonald et al., 2023). The emphasis is to ensure that at all these stages, the patient is the center of this service, and all approaches used must be person-centered.

Consequently, this study sought to understand AGYW's experiences with counselling services they received and how beneficial this interface was in relation to their PrEP uptake decision.

1.3 Problem Statement

Studies show that AGYW face numerous socio-structural barriers when seeking information on HIV and SRH services (Muhumuza et al., 2021; Nyblade et al., 2022; Njuguna et al., 2023). These include victimisation by partners, age disproportionate relationships, anticipated stigma from family and communities, negative perceptions from HCPs and strained health systems that are unsupportive of PrEP interventions in South Africa (McClinton Appollis *et al.*, 2021; Murewanhema *et al.*, 2022a; Mwongeli *et al.*, 2022). Studies have further revealed that AGYW have a poor HIV vulnerability risk assessment aptitude, highlighting a strong need for tools to support them in assessing their risk and to make informed health decisions (Wilton *et al.*, 2016; Meyer *et al.*, 2021). Most prominent HIV prevention methods are male controlled, so that females are often dependent on their sexual partners to determine whether to use protection methods or not (Celum et al., 2019; Pillay et al., 2020; Rousseau, Katz, et al., 2021; Rogers et al., 2022).

Research highlights that DSTs have been extensively used in clinical practice settings and have only recently been assessed for HIV prevention and PrEP (Meyer *et al.*, 2021; Sewell *et al.*, 2021). As AGYW remain an at-risk group for HIV infection, it is imperative to understand how a DST, coupled with counselling services, support PrEP uptake decision making.

1.4 Justification

This study seeks to evaluate at risk AGYW experiences of the "My PrEP" DST and standard of care counselling, to understand how they may have influenced their PrEP uptake decision. The study is important to explore how DSTs may promote positive health behaviours such as

PrEP uptake for at-risk groups. Understanding experiences and acceptability of DSTs would help in the design of tools that are AGYW friendly, a key contribution considering limited studies that have explored tools targeted at the group. Further, this would help support similar future innovations so that if successful, DSTs in conjunction with standard of care counselling may be scaled up for use through preferred channels. Additionally, understanding how providing counselling services may support PrEP uptake decision making by adding to the information provided by the tool, would better inform support for at risk group's needs and enlighten future interventions using the same approach.

1.5 Research Question

What are the experiences of the My PrEP decision support tool and counselling services among adolescent girls and young women in Johannesburg?

1.6 Aim

To explore AGYW aged 18-25 years' experiences of using the "My PrEP" DST and standard of care counselling services, and the influence these experiences may have had on their PrEP uptake decision at Jeppestown Clinic in Johannesburg, South Africa in 2020.

1.7 Objectives

The objectives of my study are to:

1. To explore AGYW aged 18-25 years' experiences of using "My PrEP" DST and counselling services at Jeppestown Clinic in Johannesburg, South Africa in 2020.
2. To describe the influence that the "My PrEP" DST had on AGYW aged 18-25 years' decision on PrEP uptake at Jeppestown Clinic in Johannesburg, South Africa in 2020.

1.8 Conclusion

This chapter has explored the multifaceted challenges and barriers that AGYW face in the context of HIV prevention and PrEP uptake. The segment further highlighted the unique vulnerabilities of AGYW, including social, economic, and cultural factors that exacerbate their risk of HIV infection. Contextual background related to counselling and DSTs were also explored. The integration of technology, of DSTs like "My PrEP", and counselling has shown promise in enhancing PrEP uptake and adherence, ultimately contributing to better health outcomes for this vulnerable group. While this chapter sets the foundation for the study, the next is a manuscript dedicated to the experiences of the DST and the influence it may have had on AGYW's PrEP uptake decision.

CHAPTER 2

MANUSCRIPT: JOURNAL OF THE INTERNATIONAL AIDS SOCIETY (JIAS)

This manuscript has been prepared in accordance with the guidelines of the *Journal of the International AIDS Society* (JIAS) and the requirements for a Masters research report at the University of the Witwatersrand (Wits). Detailed JIAS manuscript preparation guidelines can be found in the Appendices of this report (please refer to Appendix 8). References, which are usually included at the end of the manuscript, are placed in the Appendices, following the Wits research report guidelines.

What are the experiences of the My PrEP Decision Support Tool among Adolescent Girls and Young Women in Johannesburg?

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Keywords: South Africa, HIV, Adolescent Girls and Young Women, Decision Support Tool (DST), pre-exposure prophylaxis (PrEP), Theoretical Framework of Acceptability (TFA)

2.1 Abstract

Adolescent Girls and Young Women (AGYW) remain the most vulnerable to HIV, and in South Africa this group contributes to almost a third of People Living with HIV (PLHIV). While South Africa has rolled out oral Pre-exposure Prophylaxis (PrEP) for HIV prevention targeting at-risk groups, there remains a strong need to support uptake decision conflict. This study explores experiences and the role that a patient facing Decision Support Tool (DST) called “My PrEP” had on AGYW’s PrEP uptake decision.

Methods

We analysed qualitative data collected through a randomised controlled trial under the Prevention Options for Women Evaluation Research (POWER) project. One group received a tablet with the DST, and the other had general health information. In-depth interviews (IDI)s were conducted with both groups, however this exploration focused on the group randomised to the tool to evaluate their DST experience and influence this interface may have had on their PrEP uptake decision. Inductive framework analysis guided by Sekhon’s Theoretical Framework of Acceptability (TFA) and deductive thematic analysis was used for data analysis.

Results

The study revealed a high level of acceptability for the DST among AGYW. Key factors driving this acceptability included the tool’s simplified language, visual aids, and its alignment with participants’ lived experiences. The DST effectively facilitated informed decision-making by enhancing knowledge and supporting self-efficacy, leading to more engaging healthcare interactions. Participants valued the independence and ethicality promoted by the DST, highlighting the importance of respecting autonomy in health interventions.

Conclusion

As PrEP demand generation for at risk groups such as AGYW continues, understanding points of leverage for PrEP uptake interventions is critical in the fight against HIV. While the use of DSTs is still new in South Africa and Sub-Saharan African (SSA) region at large, these contexts stand to benefit the most from such innovations, especially towards SRH initiatives for at-risk groups.

2.2 Introduction

The Human Immunodeficiency Virus (HIV), which results in Acquired Immuno-deficiency Syndrome (AIDS) if untreated, has ravaged many nations for decades. South Africa has the world's highest number of People Living with HIV (PLHIV) at about 7,6 million, with AGYW being the most vulnerable group reflected through their contribution to almost a third (29%) of the country's cases (George *et al.*, 2022).

South African AGYW face significant barriers that increase their vulnerability to HIV/AIDS such as patriarchal social norms which reinforce male superiority even on sexual matters so that young women are disempowered in negotiating safe sex (Mabaso *et al.*, 2018), Intimate Partner Violence (IPV), limited condom use, alcohol, and drug abuse among other issues (McClinton Appollis *et al.*, 2021; Murewanhema *et al.*, 2022). Set against the backdrop of socio-cultural barriers, AGYW's limited comprehension of sexual and reproductive health (SRH) and access to necessary preventative measures exacerbate their vulnerability (Jonas *et al.*, 2020).

In 2015 the World Health Organization (WHO) recommended oral PrEP, an HIV prevention tablet that comprises of "antiretrovirals emtricitabine (FTC) and tenofovir disoproxil fumarate (TDF)" (Njuguna *et al.*, 2023: 2) as an intervention for HIV prevention for at-risk groups such as female sex workers (FSW), sero-discordant couples, men who have sex with men (MSM) then in 2016 for Sub-Saharan African (SSA) AGYW (WHO, 2016). If consistently taken, oral PrEP has been proven to provide protection from HIV by over 95% (Rousseau, Katz, *et al.*, 2021; Skovdal *et al.*, 2022; Njuguna *et al.*, 2023). South Africa rolled out PrEP distribution in 2016, initially to key populations; FSW and MSM (Pillay *et al.*, 2020). However, South Africa's Department of Health (DoH) has faced challenges in PrEP roll out, for instance limited training for healthcare providers (HCPs) leaving them grappling with providing comprehensive PrEP services amidst unsupportive health systems (Sewell *et al.*, 2021; Njuguna *et al.*, 2023).

PrEP uptake for AGYW has been negatively affected by barriers which include accessibility challenges, ill-treatment at health care facilities by HCPs, social stigma on PrEP being misconstrued at Antiretroviral Treatment (ART) and lack of support from interpersonal relationships, among other issues (Mboweni & Sumbane, 2019; McClinton Appollis *et al.*, 2021; Celum *et al.*, 2022; Murewanhema *et al.*, 2022).

Through the USAID-funded Prevention Options for Women Evaluation Research (POWER) project, a DST called "My PrEP" was developed by the POWER project team in collaboration with Dr. Christine Dehlendorf from University of California San Francisco (UCSF), as an

intervention aimed at supporting PrEP uptake.

DSTs have been extensively used to support health professionals' work and proven effective to minimise mistakes, promote efficiency, assist in making decisions on diagnosis and treatment options swiftly and to allocate resources where most needed (Ohno-Machado *et al.*, 1993; Kukafka *et al.*, 2009; Nader *et al.*, 2009). Patient-led DSTs are especially beneficial for supporting health provision in under resourced communities (Elwyn *et al.*, 2013; Manyazewal *et al.*, 2021). For key populations, DSTs have helped reduce interface with unfriendly clinicians and traveling to health care facilities (Lafferty *et al.*, 2024). In some contexts, patients appreciated reminders about taking ART which were supported by a DST (Ngowi *et al.*, 2021). For patients dealing with non-communicable diseases (NCDs), DSTs have been particularly beneficial for self-monitoring, support of a healthy lifestyle and adherence to medication (Ngowi *et al.*, 2021; Timm Id *et al.*, 2022).

Using a DST to support PrEP uptake decision conflict is a relatively new phenomena in South Africa, underscoring the importance of evaluating how it is received while also exploring whether anticipated acceptability of the intervention by its innovators was consonant with user experience. This study sought to evaluate insights shared by AGYW at Jeppetown Clinic in Johannesburg, South Africa on their experiences of using the “My PrEP” DST and the influence it may have had on their PrEP uptake decision.

2.2.1 Theoretical Framework: Theoretical Framework of Acceptability (TFA)

Sekhon's Theoretical Framework of Acceptability (TFA) was developed to guide the assessment of acceptability for seminal interventions (Sekhon, Cartwright & Francis, 2017). The framework has been used to assess the acceptability of health interventions at project conception stage, (Archer *et al.*, 2020; Lafferty *et al.*, 2024), during implementation (Pavlova, Teychenne & Olander, 2020; Timm Id *et al.*, 2022) and at end line to explore project outcomes (Groarke *et al.*, 2019; Torres *et al.*, 2020; Ngowi *et al.*, 2021).

The TFA uses seven different markers or constructs for evaluating this acceptability, namely Affective attitude, Burden, Ethicality, Intervention Coherence, Opportunity Cost, Perceived Effectiveness, and Self-efficacy (Sekhon, Cartwright & Francis, 2017). Constructs definitions are illustrated in the image below, in Figure 1.

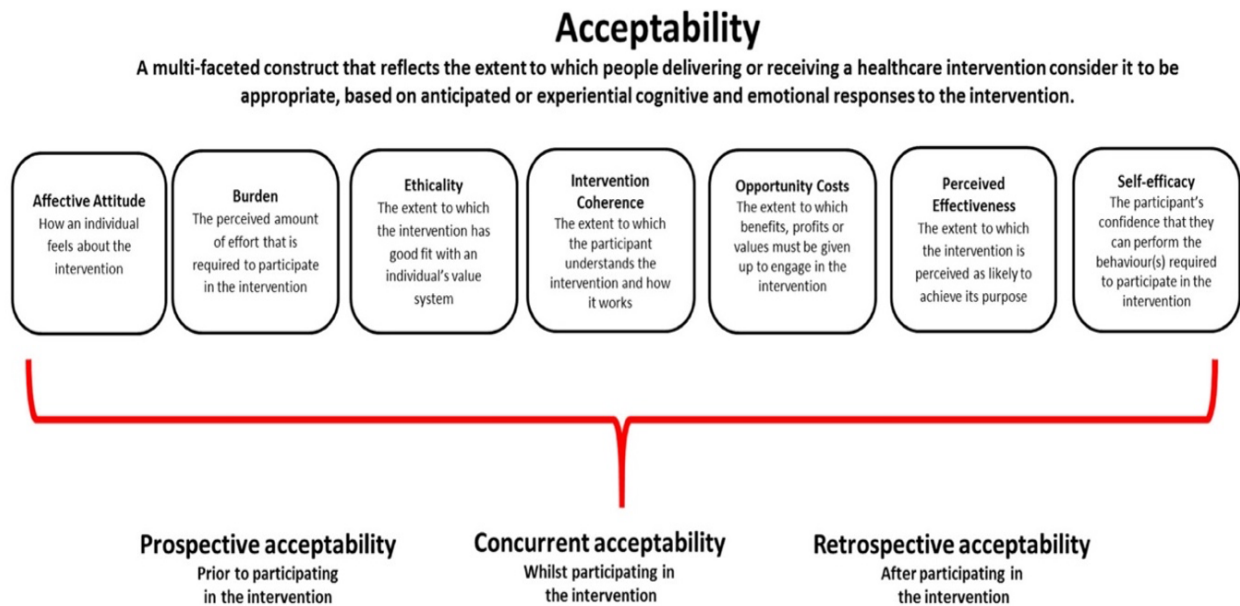


Figure 1: *The Theoretical Framework of Acceptability (Sekhon, Cartwright & Francis, 2017)*

2.3. Methods

2.3.1 Study Design and Participants

The study uses data from an exploratory qualitative component of a prospective mixed methods randomised control trial (RCT) collected in 2020 at Jeppestown Clinic, Johannesburg, about a patient facing DST to promote PrEP uptake among AGYW. It was embedded in a USAID funded POWER project clinical trial assessing the effectiveness of the DST among AGYW aged 18-25 years of age, with an HIV negative status but at risk of HIV infection. Qualitative data from the intervention arm's participants, specifically their interactions and perceptions of the DST, was the focus of this analysis.

2.3.2 Study setting

Jeppestown Clinic is located in Region F of the Johannesburg Metropolitan area, within the inner city of Johannesburg, South Africa. This area is primarily inhabited by black, cross border migrants, working-class who face social challenges such as crime, poor living conditions, limited resources, abandoned buildings, and overcrowding (Fickling, 2021). Jeppestown has been a hotspot for conflict and xenophobic violence, with migrants frequently facing targeted victimisation and unsupportive law enforcement (Tawodzera and Crush, 2023). Jeppestown migrants are predisposed to risky sexual behavior as male migrants spend extended periods away from home, while females migrants may engage in transactional sex to secure food or

money (IOM & UNAIDS, 2003). Local healthcare facilities are under-resourced and overwhelmed, exacerbating these issues (Rees *et al.*, 2017).

2.3.3 Sampling and Recruitment

A random sample of a thousand (n=1000) HIV uninfected AGYW who visited Jeppestown Clinic were recruited for the RCT and four hundred (n=400) enrolled for the sub-study of the “My PrEP” DST.

Participants were randomised 1:1 by weekday either to the intervention arm (DST and counselling), or to a control group (a general health website and standard of care counselling) (Celum *et al.*, 2023). AGYW who travelled together were randomised to the same intervention arm to ameliorate potential PrEP uptake influences. Using purposive sampling, a subset of ten participants (n=10) from the intervention arm and ten (n=10) participants from the control group completed IDIs at the conclusion of their visit to the clinic. This qualitative research focused on ten (n=10) participants exposed to the DST and standard of care counselling, with focus on their experiences of the DST.

2.3.4 Data Collection

AGYW participants were purposively selected for once-off IDIs using a semi-structured interview guide (Appendix 4) to explore AGYW’s perceptions and experiences with the DST together with likes, dislikes and recommendation for improvement. IDIs were conducted by trained and experienced researchers, at a private venue at the Wits RHI offices in Hillbrow, Johannesburg and were approximately 45-60 minutes long. Some IDIs were conducted on the day of the intervention, while others were done a few days later. These were conducted using either English, isiZulu or combination of both languages as these are the widely spoken and preferred languages in the area. IDI audio recordings then later transcribed and translated verbatim to English. IDIs and transcription of audio recordings were all conducted by an all-female team.

2.3.5 Data Analysis

A combination of hand-coding and through NVIVO software guided by a codebook developed with the TFA’s seven constructs’ direction were used to analyse IDI transcripts. An inductive framework analysis was employed, utilising broad and fine codes derived through deductive reasoning based on framework constructs. Inter-coder agreement was established among co-authors to reach consensus on codes and themes. The following table illustrates TFA constructs’ definition and their contextualisation for this study.

Construct	TFA Definition	Study Application
Affective Attitude	An individual's feeling of taking part in an intervention	How prior knowledge of PrEP, the intervention and anticipated benefits of taking part in the intervention influenced AGYW attitudes towards DST
Burden	Extent of effort required in taking part in the intervention	Reported, anticipated and experienced side-effects of taking PrEP
Ethicality	How the intervention fits into the individual's values	Construct was applied as is.
Intervention Coherence	How an individual understands the intervention and how it works	Perceptions on provided information by DST, understanding was evaluated through participants' information recall, clarification process, and how they actively fact checked received information
Opportunity Cost	Perceived values, benefits and profits that one needs to give up to engage in the intervention	Construct was applied as is, by extension this was used to explore challenges related to PrEP side effects
Perceived effectiveness	Understanding of the intervention effectiveness	Perceptions on the intervention's effectiveness applied to; DST information provision, credibility, experiences of the intervention such as provider and clinical services received.
Self-efficacy	Perception by the individual they can effectively participate in the intervention	Perceptions about ease of interacting with the DST, candidly assess vulnerability to HIV and decisively resolve to take up PrEP

Figure 2: TFA Constructs Application Matrix

2.3.6 Ethical Considerations

Both the primary study (HREC Clearance Certificate Number M180789), and secondary research (HREC Clearance Certificate Number M240433) ethics approval, was obtained from the Human Research Ethics Committee (HREC) Medical at the University of the Witwatersrand in Johannesburg, South Africa. Participants provided written informed consent. Anonymised IDI transcripts were kept in a password protected Microsoft Teams SharePoint folder. Number codes were used as identifiers for transcripts in the primary study. This study used pseudonyms to further anonymise and humanise participants. This research benefited from ethical safeguards from the primary study which were also upheld throughout this study.

2.4 Results

Three main themes were uncovered which are; Relevance and usability of the DST, DST User Experience Perceptions and DST improvement and scale up. The following six sub themes were then identified; DST provided enlightening information, AGYW processing and interpretation of DST information, Participant lived experience influenced DST appeal, Perceptions on DST interaction, Authenticity verification and trust determination of DST information, and DST improvement and scale up.

2.4.1 Relevance and Usability of DST Content

2.4.1.1 DST Provided Enlightening Information

The DST provided information to enhance understanding of various issues for AGYW, prominently the knowledge that there is a pill that prevents HIV infection (Affective attitude) which was the major appeal for participants' PrEP uptake (Perceived efficacy). The DST particularly provided enlightening PrEP information they were unaware of, which resonated with respondents (Ethicality) and positively impacted their perceptions on PrEP,

"I saw that it was said even pregnant women can take it" (Bahle)

"You can stop anytime you want to, and you can still come to take the pill, so that's what I like that it's not a lifetime thing" (Hazel).

"I liked that it had other, you know, other questions that I didn't think about, but it was there, which I could read from" (Thandiwe).

2.4.1.2 AGYW Processing and Interpretation of DST Information

Most participants found DST information easy to understand,

"It was perfect actually, the sections. It wasn't just a paragraph, like sections. What is PrEP, they explain what PrEP is, how it works and they would explain it, put pictures in there and stuff, so yeah. It was interesting to read. I actually hate reading like something that's just a paragraph you know see to actually reading so. It was actually perfect because like there were pictures you can refer to" (Zandile)

Short sections which included images helped Zandile's understanding of DST information (Intervention coherence), also shared by Bahle,

"Sometimes when you read things it has difficult words that will require you to have a dictionary to look up words, but it explained in a simple manner it was short and simple" (Bahle)

However, Bongiwe shared a different experience,

"I read about how the pill is used. I don't remember clearly because there was a lot of information. The first thing I read was how you take the pill. They explained that even when you take it, it doesn't prevent you from getting pregnant, you can get pregnant. It only prevents HIV; I don't remember the other stuff". (Bongiwe)

Although Bongiwe can recall received information, her recollection extent is limited as she later adds, illustrating the construct of burden,

"I didn't know that someone was going to ask me about what I read there, but I did read" (Bongiwe).

2.4.1.3 Participant Lived Experience Influenced DST Appeal

There are differing reasons why the DST was appealing for AGYW. Relatable vignettes presented in the tool were appealing for the following participant,

"Uh it actually felt good because there were other stories about other people who've actually there was like a lady, like 19-year-old lady who's using PrEP like she said she has a partner who is older than her, so that's why she was basically using the pill" (Zandile)

Reading stories/ vignettes from young people like herself, made information in the tool relatable and resonates with Zandile's personal experience. She later recounts that her partner has a girlfriend, and recently she had a sexual encounter with someone else who is not her partner. Therefore, stories shared by the DST helped participants effectively assess their own risk, prompted by similar stories in the tool (Ethicality, Self-efficacy).

In addition to PrEP information, the DST also contained information on family planning and STIs. Interestingly, study AGYW were drawn to information related to what is important

according to their lived experiences (Affective attitude). For one participant the difference between PrEP and post-exposure prophylaxis (PEP) was notable, while another remembered family planning information,

“Well, we go like what the PrEP is and how the PrEP differs from the PEP like that pill they give when someone is raped... Yes, the differences is, how the PrEP works and how it differs from the PEP and the facts about the PrEP” (Musa).

“I remember was that you can get pregnant whilst you are on injection but not all of us and that like if you are on the injection some of us, we don’t all go on periods and others can go on their periods but in a strange way” (Bahle).

Some participants zeroed in on PrEP information only, likely as that was their main interest. When Lungile was asked if she noted STI’s or family planning information in the DST, she highlights that she saw, *“Only PrEP... [no STIs] ... only PrEP”*. Further, Bongiwe recounted facts about PrEP but when asked about family planning or STI information, she states, *“I don’t remember”* (Intervention coherence, Ethicality).

2.5 DST User-Experience Perceptions

2.5.1 Perceptions on DST Interaction

The opportunity to independently interact with the DST was appreciated by some participants. For Lerato the latitude to extensively read provided information independently without mediation from intervention providers intrigued her so much that she expresses an interest to continue reading, (Affective attitude, Intervention coherence).

“I didn’t know what type of a thing is PrEP. That’s why I didn’t trust it, when they showed me (DST) and I read, I actually read it on my own, they did not read it for me. They gave me time and said I must read it on my own. I read it, I would actually like to continue so that I can know what I have not learnt.” (Lerato)

However, some participants’ interaction with the tool was interrupted, for instance Bahle’s encounter with the DST was limited as she was called to another service point,

“It explained everything that I did on that day but I didn’t have time to read it all cause I had to go inside I just read about PrEP and family planning but the STI’s I didn’t get to it” (Bahle)

Prudence did not get an opportunity to interact with the tool at all, expressing that, *“They didn’t show me a tablet”*, when asked about the DST. She however indicates that her uptake was largely influenced by her counselling encounter.

AGYW expressed overwhelmingly negative perceptions of public health care facilities, sharing that the environments have minimal engagement beyond the core business of service provision. The DST intervention experience sharply contrasted with their expectations because unlike other HCFs where information is rarely shared and sought, the DST provided valuable, accessible and engaging health insights. This unexpected shift in their healthcare interaction evoked positive responses towards the tool and the provided information (Affective attitude),

“Today’s one was very helpful cause I got a lot of information and better knowledge [than] I get from the clinic like I said I don’t ask anything at the clinic, I just do what I came for then I would leave, so today the experience I experienced was alright” (Bahle)

“It was actually a good thing cause now they are doing extra cause they now giving me information of things that I didn’t know cause such information you have to look on the internet or your medical aid has to give you such things you see but on my side medical aid doesn’t update us on such things you see so I was glad” (Musa)

2.5.2 Authenticity Verification and Trust Determination of DST Information

There is strong evidence from the interviews that AGYW are not passive takers of information, the participants actively verify to discern the authenticity of provided guidelines and for trust determination. Thandiwe and Lungile particularly highlighted using online sources to verify DST information to ascertain its accuracy and determine PrEP efficacy, (Intervention coherence, Ethicality),

“Uh, not a 100%, but I also went online to read about it after the whole process and stuff...and then it also said the same thing” (Thandiwe)

“I googled, okay how does PrEP work. Okay google will tell you whatever you want to know. Okay fine it told me that it’s not exactly 100%, it’s 90%, okay then I understood that it will stop-I mean prevent this thing, to be infected and stuff like that. Yeah, then I said I want it, yeah” (Lungile)

2.5.3 DST Improvement and Scale Up

AGYW participants overwhelmingly expressed an appreciation for the DST as an innovative platform providing critical information in a simplified language and format. However, lack of sufficient time for some participants to engage with the DST to their satisfaction was a drawback, as previously highlighted.

Recommendations by AGYW participants on how the DST can be improved include sharing information on TV and radio, with inference that radio particularly provides wider coverage for disconnected communities such as rural communities,

“On radio they talk about important things with faster coverage” (Soneni),

Preferred platforms for the DST were on mobile phones as an application for ready access, to receive updates on PrEP and any health developments as well as to conveniently extensively interact with the tool.

Opportunities presented by congested public healthcare facilities were also flagged as an intervention point so that people interact with the tool during lengthy waiting periods,

“The clinics are always busy, I think while we are waiting we would read like sometimes nurses would be on tea time or lunch and we are waiting a long time, it would be easier while we waiting to be reading, getting a lot of information” (Bahle)

Another participant suggested the DST deployment beyond health care facilities,

“Uh I think you can improve like going to schools and talk about it so like everyone can be aware about it instead of being only in clinics because not everyone goes to the clinic” (Thandiwe).

This targeted approach is positively perceived considering AGYW infrequently visit HCFs but are readily available in schools.

2.6 Discussion

This study sought to evaluate insights shared by AGYW at Jeppestown Clinic in Johannesburg, South Africa on their experiences of using the “My PrEP” DST and the influence it may have had on their PrEP uptake decision. The study findings indicate a high level of acceptability for the DST by AGYW participants. Their acceptability was linked to various factors that promoted a positive affective attitude towards the DST and intervention, such as simplified language, use of visual aids and succinctly written information which participants indicated made understanding the tool easy and accessible. These findings resonate with communication preferences highlighted by other studies illustrating that adolescents prefer visual, digital and easy to understand content (WHO, 2020; Yam & McClair, 2021).

This understanding was critical for decision making for AGYW as it helped add to their knowledge for this seminal intervention (PrEP) that most were either unaware of or did not understand. Other studies illustrate that the addition to their knowledge and understanding, is crucial for participant decision conflict especially for new interventions and helps clients feel comfortable with their decision (Stacey *et al.*, 2017).

Another key contributory factor to the DST's acceptability among AGYW hinged on its ethicality for participants. This was established in various ways, for instance the ability to engage extensively with the tool without provider interference engendered positive sentiments and trust in the information shared, and implicitly the efficacy propensity of the intervention. AGYW felt that the DST experience enhanced their interaction with HCPs through the proactive information sharing approach which was particularly appreciated. Therefore, the DST contributed to fostering a more informative and engaging healthcare interaction beyond their routine medical procedures. This is different from experiences they often face, such as judgemental and unsupportive environments where cultural and social norms influence avoidance or punitive reactions of SRH discussions for AGYW (Lanham *et al.*, 2021; Duby *et al.*, 2022; Njuguna *et al.*, 2023). Having a different experience supported a positive affective attitude towards information shared by the DST as well as trust and uptake of PrEP.

Ethicality of the DST intervention was evident when participants felt it resonated with them. Personal stories/ vignettes of AGYW embedded in the DST were appealing and echoed the participants own lived experience, helping support self-efficacy through self-reflection on HIV risk, and notably their need to uptake PrEP. Experience driven interests influenced the type of information that participants retained, although ultimately PrEP remained their main point of interest.

Intervention perceived efficacy was established by AGYW through noting how the DST addressed their concerns, but significantly when respondents actively verified information shared to evaluate its authenticity. This study, (Skinner *et al.*, 2003), highlights that adolescents prefer online sources, although they often struggle with copious amounts of online information. It further highlights that youths prefer having a health professional provide some guidance on health information curation. Furthermore, South African youths find online health information sources useful to evaluate information received from peers (Tshuma *et al.*, 2017). This active engagement with information and authenticity determination echoes this study's finding that while AGYW received information from the DST, they still chose to further evaluate the information to determine its authenticity and trust using sources they often use and prefer.

Participants proffered different ways of expanding access to the DST through content accessible media formats such as an application on mobile phones, sharing the information from the tool on radio and TV and outreaches to schools where adolescents are readily accessible. The development of mobile friendly version of the DST was highlighted as a crucial platform for continuous engagement, while radio is flagged as a useful platform for communities that may have limited mobile cellular network coverage.

2.7 Conclusion

The study's findings underscore a high level of acceptability for the DST among AGYW, driven by factors such as the tool's simplified language, visual aids, and resonance with participants' lived experiences. The DST facilitated informed decision-making by enhancing knowledge and supporting self-efficacy, ultimately fostering a more engaging healthcare interaction. Moreover, the independence and ethicality valued by participants highlight the importance of respecting autonomy in health interventions.

The feedback on expanding access through mobile applications and broader media platforms suggests a promising path for future implementations, ensuring wider reach and sustained engagement with the target audience. Future studies should address time constraints to ensure participants can fully engage with the tool through having a systematic intervention delivery. It is also important to consider different settings, particularly resource-limited rural areas, for the rollout of such innovations, and to support decision-making processes beyond the initiation of PrEP.

2.8 Limitations and Recommendations

Social desirability is a possible limitation due to the sensitive nature of SRH topics. The research team implemented measures such as confidentiality assurances, researcher training, conducting the study in a secure environment to mitigate this factor. Sharp recall of the experience with the DST may have been altered by interviewing participants days after intervention delivery. This inadvertently brought depth to findings as some participants shared reactions of their PrEP uptake from interpersonal relationships and experienced side-effects. Limited interaction with the DST may have negatively impacted some participants' perceptions regarding its influence on their decision to uptake PrEP.

Funding Information

This study was self-funded by the lead researcher, Senziwani Ndlovu. The study used primary data from the POWER project funded by USAID.

Competing Interests

The authors confirm that views expressed in this publication are those of the authors alone and do not necessarily reflect the official stance of the POWER project funder, USAID.

Authors Contributions

Senziwani Ndlovu conducted all the analyses and was responsible for writing the manuscript. Janine Anthea White contributed to editing the manuscript, supported data analysis and intercoder agreement establishment. Makhosazane Khoza-Ndimande contributed to designing the primary qualitative study, collecting qualitative data, supported data analysis and editing the manuscript. Sinead Delany-Moretlwe and Connie Celum designed the research study with funding support from the USAID. All authors reviewed and approved the final manuscript.

Acknowledgements

We acknowledge the study team's diligent work in the primary study data collection and provided crucial building blocks for the success of this study. We also thank all participants in the primary study, whose contributions have been essential in shaping the outcomes of this research.

CHAPTER 3

EXTENDED METHODS

Introduction

As this study was secondary research, much of the data collection planning and collection were undertaken during the primary study. The focus on this section is to provide additional information, principally on data management and analysis.

3.1 Data Analysis

While the manuscript highlights the analysis process related to the DST using the TFA and its constructs, this section will underline processes undertaken to uncover perceptions on experiences with the intervention and counselling interface of AGYW of Jeppestown, Johannesburg.

The following themes were deductively thematically analysed to uncover the following broad codes; Support for PrEP uptake, Risk assessment, Intervention upscaling, Provider experience, Motivation for HCF visit and Counselling experience. This process was key especially to uncover perceptions around the intervention delivery, particularly counselling interaction. These codes, together with those guided by TFA constructs, helped in drawing meaningful conclusions and explaining findings related to the research question.

3.2 Data Management

The primary study provided participants with an information sheet (Appendix 2) that detailed the study purpose, procedures, risk and benefits to the participant, assured them of confidentiality, and pathways available to address any questions they may have. Their written consent was sought and provided. Audio recordings from IDIs were stored securely in a locked cupboard with an access restricted room at the research site. Recordings were later translated to English, transcribed then stored on Microsoft Teams.

Anonymised transcripts, through number codes, from IDI randomised to the intervention arm were received from Wits RHI then uploaded to Microsoft SharePoint with restricted access to supervisors and the researcher. Transcript number codes were further converted to pseudonyms (Appendix 5) to add another layer of safeguarding participants and to humanise them. Transcripts were also added to NVivo software for analysis, which is password protected, and the researcher had sole access to. Printed transcripts for manual coding were stored in a locked cabinet, then disposed of through shredding after the data analysis process was complete.

CHAPTER 4

EXTENDED RESULTS

Introduction

This chapter is an extension of findings uncovered from analysing the data of AGYW's experiences with the "My PrEP" DST, counselling services and the influence these may have had on their PrEP uptake decision at Jeppestown clinic in 2020. While the manuscript is focused on DST experiences among AGYW, this chapter will explore how both the DST and counselling influence their oral PrEP uptake decision. This chapter will provide an expansive results presentation, with particular focus on the experiences of using the DST and counselling.

Elements of the TFA which are; Affective attitude, Burden, Ethicality, Intervention Coherence, Opportunity Cost, Perceived Effectiveness, and Self-efficacy are woven into study findings using illustrative quotations showing how TFA constructs tie into a salient point. The applicable construct is indicated at the end of the relevant finding. The chapter will conclude by highlighting overall perceptions on the DST and suggestions on its improvement and upscaling for wider coverage.

4.1 AGYWs Perspectives on their Counselling Experience

4.1.1 Provider Experience Matters: A Safe and Supportive Space

There is a strong link between a positive experience that participants had with counsellors and positive influence on intervention understanding and PrEP uptake (Intervention coherence, Affective attitude). Counsellors need to provide a conducive environment where AGYW can speak freely, as SRH issues are a sensitive subject. This intervention palpably supported such an environment where questions were asked in a way that AGYW do not feel judged or demeaned,

"They don't just ask if you're having sex and like they don't... some people you just can't even answer that question because of the way they're asking it and the way they are just portraying themselves to you. They told, we answered, like basically we loved like everything they told us. Like we know like we're a youth, we also have sex, and we know how it's like and stuff so" (Zandile).

"Like everything was fine, I was always laughing. They are friendly, everyone was friendly even if let's say for instance I don't know I'm already infected or what, even if I tested positive, I don't think they would let me feel down. They were going to make me feel okay, like was alright" (Lungile)

These anecdotes are representative of all AGYW participants who expressed satisfaction with intervention counsellors. They felt they were in a supportive environment so that when questions were asked, it was done in a manner that was non-judgmental and relatable (Ethicality).

4.1.2 Respect for Autonomy and Taking Charge

AGYW in this study highlighted negative perceptions about public HCPs and health care facilities from past experience and had preconceived expectations about treatment they will likely receive at the intervention healthcare facilities. For the following participant, prior experience with other HCPs tainted her perceptions about providers as she felt they overlook client preferences,

“He was even able to explain, he didn’t just say which one I want maybe the injection or the implant, he didn’t do whatever he wanted to do because some others do that and it becomes an issue, inserting something they want without explaining. So, there is nothing that was wrong, I loved everything” (Bongiwe)

Besides owning decisions about their health, these sentiments demonstrate that AGYW prefer to take the lead on their health decisions and not feel as if they are imposed (Ethicality).

Taking charge in decision making is an opportunity to take ownership of their health decisions and avoid apportioning blame in case challenges later emerge as one participant highlighted,

“No it’s better I do it for myself should anything happen I would put the blame on me, not to ask them to help me choose what if it doesn’t treat me good and I start blaming someone and say hey you made me choose something that is not treating me well, so it better I chose for myself and nobody else” (Bahle)

Bahle further added that she appreciated the experience at Jeppestown Clinic as providers explained each step taken during her visit and felt that whatever that was happening was more of “an interaction”.

The support of agency in making health choices and a positive interaction with providers underscore the unique benefit that counselling provides over the DST.

4.1.3 Perceptions of Provider Confidence in Intervention

AGYW used their interaction with counsellors to evaluate the authenticity and quality of the intervention and DST information. Counsellors needed to provide PrEP information confidently and demonstrate that they knew and were sure of the intervention as participants

perceived this as an indication that the information shared is factual (Perceived Effectiveness, Intervention Coherence),

“(Staff member) was very welcoming, based on the information she has, she is well aware of PrEP, you know there was no way when she was talking and she has to think, she knew what she was saying and with (Staff member) too, he had said he will just add to what was said to me, but then it was merely the same thing because I think (Staff member) took it all out, you know, and then with prevention and all that, (Staff member) was the one helping.” (Hazel)

However, being convinced to take PrEP did not quite equate to trust in it as expressed by Thandiwe. Upon entry to the intervention site, she highlights that,

“The people who waited for us at the door, they were very convincing” (Intervention coherence, Affective attitude).

Although she does take up PrEP, Thandiwe later highlights she is not fully convinced indicating that *“I am, a bit”* when asked about her trust in the medication.

4.1.4 Counselling helps Prepare AGYW on Uptake Plans and Reactions

Challenges experienced in relation to PrEP side effects were raised, most stark for Lerato whose living conditions make it difficult for her to bear the PrEP side-effects, as she feels unwanted and is often told that she is a burden. The side-effects further compound this challenge as she indicates,

“Yes, sister, sometimes I take it, sometimes since on Saturday, I just don’t want to lie, I want to speak the truth, I did not take it, why, it makes me hungry..... yes, he sometimes has a tendency to say, you eat more than other children, other children should also get food.” (Lerato)

The participant has initiated PrEP uptake but faces an unsupportive home environment which makes it difficult to deal with experienced side effects (Burden). Sharing this experience was particularly beneficial for Lerato as the counsellor suggested she needed to share her uptake decision with those she lives with in order to gain support. Lerato left the healthcare facility with a flier about PrEP, (Self-efficacy), then used it to share her PrEP uptake back home with her family members. Although her uncle was strongly opposed and took her uptake as evidence that she is HIV positive, this did not deter her as she decided to discuss her decision with her aunt,

“Now that she is a woman, yes. I explained to her, we discussed it and she said I can take these tablets, but she wants to see them since she knows those that are used by sick people, I showed her.”

This highlights the importance of inter-personal support for AGYW, and having the interaction with counsellors helped strengthen the resolve (Self-efficacy) to disclose and be ready to deal with opposition which some may not fully comprehend or anticipate following disclosure.

Counselling was also beneficial for AGYW by helping them understand plans they need to make to take and adhere to PrEP. Counsellors asked participants about their plans on taking medication, Thandiwe shared hers,

“I’ll drink them at the same time right...I’ll tell my mom what time I drink them so that she can also remind me.”

Counsellors also used their interaction with participants to advise them of disclosure benefits,

*“He said if it happens someone sees you taking this pill everyday they will start asking questions so I have to tell maybe one of my friends or sister or mother, you see. So I told him cause they had given me thirty pills so I told him maybe when I come back for collection the second time I might tell them but for now I just want to see like what side effects will I have in my body
(Bahle)*

Although Bahle is made aware of disclosure benefits, she chooses to postpone the revelation in case of negative side effects she may experience (Burden, Opportunity Costs). Disclosure delay while also ‘testing’ the PrEP tablets, points to the participant’s hesitancy. Participants like Thandiwe, are more resolute in their decision,

“That’s up to him, I won’t stop the pill, he can think what he thinks. When he is around, how will I take it? What must I do? So, I’ll tell him. Whether he accepts it or not, it doesn’t concern me” (Self-efficacy).

4.1.5 Significant Counselling Experience

Some respondents found counselling to be more impactful on their PrEP uptake decision (Intervention Coherence).

“About the tablet? I can’t say whether I like it or not because the information in there I already heard it” (Lungile).

Lungile’s sentiments indicate that DST did not have as much of an influence on her decision as she felt she has already received enough information from the counsellor (Perceived Effectiveness).

On the other hand, Thandiwe appreciates the added layer of counselling with the DST as she expressed;

“Yeah, it is a good thing because like when they explain something to you, there are things they may miss and not explain to you, so when you read, you can read broadly and be like oh, okay this is this, this is that, yeah” (Thandiwe).

Having the DST as well as counselling benefits the participant as she perceives that counselling may not be as exhaustive in information provision (Affective Attitude).

4.2 Dual Support from the DST and Counselling

4.2.1 Clarification of Concerning Issues

The perceived benefits the intervention provides should outweigh challenges or harm that it may bring. For the following participant the possibility of the pill hindering her plans to have children is an important factor to consider with respect to her PrEP uptake decision (Ethicality),

“I would take it cause before I read the tablet, I asked if you taking this PrEP will you get pregnant cause I did not want to take a pill that will make me infertile. I asked him if taking this pill will not make me infertile and he said no its just to protect you from getting HIV then I was going to take them cause I didn’t want something that was going to make me to not have kids so that was the first I asked” (Bahle)

The interaction with the counsellor provided the needed opportunity for Bahle to clarify if her PrEP uptake would hinder her fertility.

Besides clarifying issues of concern, Bahle was also alert to information gaps during her interaction with the counselor as she shared,

“[name of staff withheld] did not say that if you take PrEP it will prevent you from getting pregnant but the tablet said you don’t take PrEP as a morning after pill he did not say that, and again what he did not say was that PrEP can be taken by males too but it said PrEP can be taken by men and women he did not mention it” (Bahle)

Therefore, the ability of the DST to support such gaps during provider interaction highlights the importance of both interventions to ensure consolidation of needed information by AGYW (Intervention Coherence).

4.2.2 DST and Counselling Supported Intervention Comprehension

Intervention understanding was strongly linked to the quality of interaction with providers, together with the simplicity of the DST information. The following participant highlights that her decision to uptake PrEP was influenced by the dual support from DST information and the manner that counsellors explained to her, emphasising the DST’s simplicity,

“What can I say, what made me to take PrEP the way they explained PrEP to me and the tablet made it simple to understand so I thought why should I be left behind, let me take it cause it will work for me from the information they had given me I didn’t want to have any regrets of I should have when things have gone wrong that is why I took it” (Bahle) (Intervention Coherence)

The DST information simplicity was further strengthened by Zandile who valued the easy-to-understand information supported by images and short sections (Intervention Coherence),

“It was perfect actually, the sections. It wasn’t just a paragraph, like sections. What is PrEP, they explain what PrEP is, how it works and they would explain it, put pictures in there and stuff, so yeah. It was interesting to read. I actually hate reading, like something that’s just a paragraph you know see to actually reading so. It was actually perfect because like there were pictures you can refer to” (Zandile)

4.2.3 Counselling Interface and Timing Key

The study reinforced the value of interacting with both counsellors and the DST. For instance, Hazel believes the DST and counsellors each play a unique role,

“Yeah, I think you should do it because I feel like there are things that you can’t give me all the information on and then tablet has those things because there is where they tell you with the true questions and the myth and all that, so yes and if you have ever done the mistake and you said no, it helps with this, only to find that it did not say something like this, it said something like that, so I feel it’s a good thing too” (Hazel)

Face to face interaction proved important particularly for Prudence who did not get an opportunity to interact with the DST. She deferred to verifying the intervention at different points of service provision, and the synergy in provided information was proof enough that she can trust PrEP,

“What I like is that something that I heard that other side, I also heard this side where I get tested”. (Prudence)

While the intervention plan initially intended for participants interacting with the tool then the counsellor, in some instances this was not the case. For instance, one participant interacted with the DST after a counselling interface. Thus, the input of the tool was not well appreciated as she perceived she received sufficient information to inform her decision (Intervention coherence),

“About the tablet? I can’t say whether I like it or not because the information in there I already heard it” (Lungile).

4.2.4 Risk-Assessment: Support for Personal Risk Assessment

DST interface and counselling helped AGYW to effectively assess their own risk to HIV due to their lifestyle or the contribution that a partner adds to their vulnerability. For instance, AGYW highlight their partner's resistance to using protection during sex,

"He's someone who doesn't like or believe in condoms" (Bongiwe),

"He has never agreed to use a condom" (Soneni)

Risky behaviors that AGYW also indulge in add to their vulnerability to HIV. Thandiwe shared that she is not in a relationship but has a "Sex buddy", someone she meets often solely for sexual encounters. She does not know if that person is in a relationship with someone else but indicates they use protection whenever they indulge in sexual intercourse.

In some instances, AGYW actively indulge in risky behaviour for financial benefits,

"I can say I need them (PrEP) cause I have the father of my baby at the same time I have someone else on the side and then this guy on the side sometimes we have sex sometimes we don't use a condom..... and with the father of my baby we don't use a condom. So, I wouldn't say I don't need them cause I don't know what he is doing if he is not with me. Even though the other guy on the side, I don't know what he is doing when I'm not with him, maybe there are people that they sleep with without condoms you see.... The other partner he is in my life cause if I want something he gives me he's what can I say he is 29 years old" (Bahle).

Bahle is aware of her exposure through concurrent partners, where she does not consistently use HIV protection. Financial benefit from one partner is the motivation for the sexual engagement, and as previously highlighted, in transactional relationships AGYW are often disempowered in negotiating safe sex.

The participants' decision to take up PrEP demonstrates their ability to candidly assess their risk and that of their partners, which can be attributed to their counselling experience as it helped her understand their vulnerability as they were sharing their relationship dynamics with a counsellor.

Hazel attributed her understanding of her vulnerability to the information she saw in the tool,

"So, this thing (DST) opened my eyes that It means its something he is doing, yes maybe he won't have a child with that person as he's saying to me but I can't tell and I wont know how many people he have sex with, when he comes here.... "

For Zanele, the relatable stories that she noted in the DST helped her understand her own vulnerability to HIV,

“Uh it actually felt good because there were other stories about other people who've actually there was like a lady, like 19-year-old lady who's using PrEP like she said she has a partner who is older than her, so that's why she was basically using the pill” (Zandile)

The DST information resonated with Zandile's personal experiences as she later recounts that her partner has a girlfriend, and she recently had a sexual encounter with someone else who is not her partner. Therefore, stories shared by the DST as well as sharing their relationship dynamics through counselling interaction helped participants effectively assess their own risk (Ethicality, Self-efficacy).

4.2.5 Support for Partner Risk Assessment Aptitude

There is evidence that participants are somewhat aware of relationship dynamics that make them vulnerable to HIV,

“Because my boyfriend has a girlfriend” (Soneni)

“So, I said to him that can we please go to Clicks to buy those home tests for HIV and then he gave me the run around, this one is messing with me” (Lungile)

Often, lack of trust in relationships is the reason why study AGYW perceive that their partner puts them at risk of contracting HIV, which is further heightened when AGYW feel their partner is not transparent about their HIV status as illustrated in the following sentiments,

“Because I had slept with this guy and I don't trust him.” (Hazel)

“Because my boyfriend has a girlfriend... Because I don't trust him” (Soneni)

“I don't know his HIV status, but I do trust him, but not so much” (Bongiwe)

The support from their counselling interface and expressing relationship dynamics that add to their vulnerability supported AGYW's ability to candidly assess their risk to HIV (Self-efficacy).

4.3 Overall DST Feedback and Upscaling Recommendations

While the above narrative has explored sentiments shared by participants on DST, counselling and how they influenced and supported their PrEP uptake decision, this section will specifically focus on feedback shared on how the tool can be improved for wider deployment.

4.3.1 Preferred Channels

AGYW overwhelmingly suggested that the DST should be introduced on mobile phones, possibly as an application, to ensure that they can readily interact with it and receive regular updates,

“Everything I’d prefer that, I’d prefer being updated in case the health department... there are changes in the health department and I don’t know about it so I’d rather let them keep me posted on everything” (Musa).

However, Zandile acknowledged that for some disconnected communities having the DST only on the phone would be limiting,

“Everywhere actually, because like some people, not for me but some people they don’t have access to having phone and stuff, so I think it’s quite actually necessary to have all the information everywhere” (Zandile)

Leveraging on facilitating access to the DST at public health institutions, was further noted as a great opportunity for clients to receive the information through different channels and platforms,

“You know, I feel if they could do this in every clinics and have government spaces where your are around people and make people aware of this like having TV presentations and all that, like advertisement, if it was there on TV, people would know about it because with male prevention and all that, there was a newspaper but then I feel many people don’t know because not all people are open minded, so I feel if there were many ways to communicate with people so that people may know that there’s PrEP out there, I think it would be” (Hazel)

4.3.2 Recommendation for enhancing DST information

AGYW participants provided recommendations on improvement of the scope of information contained in the DST. As the tool also provided information on family planning, some recommendations for improvement touched on this,

“Let’s say it was my first time I went for an injection I would want to know about the other options available, hear it from them and get information maybe I would love a different method as there is a three-year method, two-month injection, three months injection, sterilisation it was a lot I saw it. I would love for them to explain before I take a decision as to which one I want” (Bahle)

Hazel highlights clarity needed on available ART medication,

“No, So, they say there’s three types of ARVs and all that, so I think you have to add it so that people can be aware that it’s not something like this, it’s something like this”

For Bahle, having the information from the DST repackaged in smaller portions would be ideal,

“It’s also better like the pamphlet explains like what I saw on the tablet nice, short and simple, maybe on sms they would write a long sms but a short and simple one” (Bahle).

4.4 Conclusion

In this chapter findings on AGYW experiences of using counselling services and the “My PrEP” DST were evaluated and how both supported decision making for PrEP uptake, while linking these to relevant TFA constructs. Furthermore, it highlighted some themes outside the purview of the framework but were critical in explaining the influence that the intervention has on the target group’s decision making. In the final segment of the chapter emphasis was on providing feedback on how the tool can be improved. The following chapter will discuss study findings, proffer recommendations for the intervention, limitations of the research then outline future study opportunities emanating from identified gaps.

CHAPTER 5

DISCUSSION, LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter examines the extended findings on the combined support from DST and counselling experience for AGYW in PrEP initiation decision making and their influence on the uptake. It will outline findings related to the following main and sub themes; Perceptions on Counselling Experience: Provider Experience Matters: A Safe and Supportive Space, Respect for Autonomy and Taking Charge, Perceptions of Provider Confidence in Intervention, Counselling helps Prepare AGYW on Uptake Plans and Reactions. Dual Support from the DST and counselling: Clarification of Concerning Issues, DST and Counselling Supported Intervention Comprehension, Counselling Interface and Timing Key. Risk Assessment: Support for Personal Risk Assessment, Support for Partner Risk Assessment Aptitude. It also evaluates DST feedback themes, namely Preferred Channels and DST Improvement

5.1 Discussion

The study uncovered high levels of acceptance of the DST and support received through counselling for PrEP motivation and uptake by AGYW. Several factors contributed to this, key being the benefit of having a safe and supportive space created by counsellors. Counsellors posed questions in a non-judgemental and respectful manner which helped lead to greater engagement and appreciation for provided information. This positive space helped create an environment where AGYW felt comfortable to discuss SRH concerns, to freely ask questions whose answers they received thus supporting a positive affective attitude to PrEP uptake.

This finding highlights the importance of ensuring that HCPs create a conducive environment where AGYW feel heard, respected and supported which then enhances intervention outcomes and supports their self-efficacy for PrEP uptake. This finding is supported by evidence from other studies that when AGYW have access to AYFS, they feel supported and will likely take up PrEP (Emmanuel *et al.*, 2020; Skovdal *et al.*, 2022). This points to a strong need to ensure these services are not only available for at-risk groups such as AGYW but also enhanced in the fight against HIV.

Another aspect that promoted the acceptance of this intervention is the feeling by AGYW participants that they are empowered to independently make SRH decisions by counsellors. This was achieved through interactions that respected their autonomy and allowed them to take ownership of their health decisions in case of future complications. This was in sharp

contrast to previous public HCP encounters where their agency is negated (Makoe *et al.*, 2022; Nyblade *et al.*, 2022). Respect for participants' autonomy was construed by AGYW as an indication they received ethical counselling that supported self-determination in SRH matters. The ethicality of this approach enhanced the intervention to participants, leading to a positive affective attitude towards PrEP uptake.

This demonstrates that AGYW respond better to interventions that acknowledge them as active participants rather than passive recipients of health decisions. This autonomy in decision making is not only appreciated by AGYW, but studies also show that it promotes a positive culture of SRH communication which may be beneficial in their protection from HIV (Duby *et al.*, 2023). Critically it also supports their self-efficacy to make informed decisions about sex such as resisting partner pressure to indulge in sex and seeking health services (Groenewald, Isaacs & Qoza, 2023).

Provider confidence in the intervention was a key marker or indication for AGYW on the credibility of PrEP information. Counsellors appeared knowledgeable and consistent in their messaging, which for participants indicated the intervention as credible and reliable, albeit lingering doubt by some. This underscores the importance of provider training in both technical knowledge and communication, ensuring that providers can share information, but critically that they can effectively address underlying scepticism that may persist.

Counselling helped AGYW navigate some challenges with PrEP use, such as anticipated side effects which in some cases was compounded by unsupportive environments. Counselling helped participants with coping strategies, PrEP disclosure decision with family despite some experiencing challenges such as stigma and unsupportive environments. This support helped improve AGYW's self-efficacy to explain and disclose their PrEP uptake. This finding underscores evidence from other study findings that interpersonal relationships have a large bearing on AGYW's PrEP uptake and adherence (Emmanuel *et al.*, 2020; Pillay *et al.*, 2020; Rousseau *et al.*, 2021). Besides providing information, counselling equipped AGYW with practical skills to navigate challenges, adherence strategies, disclosure planning and dealing with family dynamics, which resultantly will have better outcomes not only on PrEP initiation but adherence as well.

The DST and in person counselling proved beneficial for participants to validate, clarify information and support comprehensive information provision. For AGYW with concerns on intervention efficacy and potential negative effects it may have, the face-to-face interaction helped address concerns and lingering doubt about PrEP. The complementary support of

counselling and DST underscore the importance of integrating different platforms for information provision which enhance intervention coherence and allows participants to cross check information to reinforce their confidence in PrEP, as well as comprehensive and reassuring information.

A critical outcome of DST and counselling support was AGYW's improved ability to assess their HIV risk, enhancing self-efficacy. This study found that AGYW frequently lacked bargaining power in negotiating safe sex, with partners often determining condom use, which is in tandem with other study findings (Atkins *et al.*, 2021; McClinton Appollis *et al.*, 2021; Singer *et al.*, 2023). Relationship power imbalances with partners place AGYW at-risk of contracting HIV. The DST played a crucial role in helping AGYW recognise their exposure and take steps toward PrEP uptake. Personalised risk assessment, supported by relatable stories in the DST, further reinforced the importance of PrEP as a protective measure, strengthening evidence to participants on their vulnerability and need for oral PrEP uptake.

Study findings further show that AGYW assessed their HIV risk based on relationship dynamics and perceived trust in their partners. Many participants expressed distrust due to partners having other relationships or reluctance to take an HIV test. The DST's role in fostering self-efficacy extended to partner risk assessment, as AGYW became more aware of the importance of knowing their partner's HIV status, a valued indication of the acceptability of the intervention. Although DST support for self-efficacy and self-management have largely been deployed in support of NCD patients, it is evident that there are better health outcomes for patients when they are supported by these tools in this study, and as evidenced by others (Chao, Lin & Ma, 2019; Ngowi *et al.*, 2021).

Participants underscored the need for making the DST available on mobile phones, allowing for continuous engagement and real-time updates on health information. For those lacking access to mobile devices there is need for multiple dissemination channels, including printed materials and in-facility tools and outreach community dialogues to share PrEP information. Public HCFs health facilities were identified as ideal spaces for DST dissemination, given long waiting times. Suggestions included integrating DST content into clinic television screens, pamphlets, and posters to maximise exposure. Short, bite sized information such as through short message service (sms) are recommended for improved comprehension and engagement.

5.2 Study Limitations

Variability in DST exposure, the timing and sequence of the DST and counselling interactions was notable for different participants. Some did not get as much time as they would have preferred to interact with the tool due to demands from different service points of the intervention, others interacted with the tool after a counselling interface, leading to varied perception of DST usefulness. Responses are based on self-reported information, which may be influenced by social desirability and recall bias. Focus of the study on intervention arm participants is a missed opportunity to explore contrasts, particularly understanding the influence of independent counselling on the AGYW's PrEP uptake decision. Furthermore, having no control over collected data, for instance participants' ages, limited the exploration of how this aspect may influence the manner with which AGYW interact with the DST and verify received information.

5.3 Conclusion

The study revealed high acceptability of the dual support from DST and counselling in enhancing AGYW's comprehension, self-efficacy, and decision-making regarding PrEP uptake. The DST filled information gaps left by counselling and facilitated personal and partner risk assessment. To maximise impact, upscaling should focus on mobile accessibility, multi-platform dissemination, and content refinement to address family planning and ART information comprehensively. Addressing relationship dynamics in risk assessment further strengthens the intervention's effectiveness in promoting PrEP uptake among AGYW.

5.4 Recommendations

5.4.1 Structured Information Delivery

AGYW participants were cognisant of missing information during the counselling experience. Therefore, it is important to have a structured information delivery system for both the DST and counsellors. This would help improve message consistency and intervention coherence.

5.4.2 Order of Exposure

Consistency in order of exposure is important to ensure that the outcomes of the intervention are heightened. This means ensuring that clients interact with the DST first before provider interaction to ensure that lingering gaps or uncertainties are addressed during the counselling interface.

5.4.3 AGYW Relationship Dynamics

Relationship dynamics that heighten AGYW vulnerability in negotiating safe sex need to be tackled, most importantly supporting self-efficacy. There is evidence that African AGYW often fear or avoid SRH discussions due to cultural, religious and social norms, which inadvertently results in their preference for peer guidance who are also poorly informed (Duby *et al.*, 2022). Interventions that support parent to child SRH communication as well as addressing social determinants that heighten their vulnerability such as financial incapacity would go a long way in improving AGYW's self-efficacy.

5.4.4 DST for Supporting Health Outcomes in the African Context

As this study has exposed the critical benefit of DSTs for supporting decisional conflict in PrEP uptake, this innovation can be leveraged on especially in the fight against HIV for at-risk groups due to its benefit in empowering individual decision making. African countries grapple with challenges such as lower digital literacy, poor internet connectivity especially in rural communities while also having unique ethical and language identities. There remains a need to ensure that interventions such as DSTs are harnessed, while also being responsive to unique needs and challenges of the African context.

5.4.5 Leveraging Different Communication Channels

The DST and counselling interventions demonstrated the unique benefit that can be realised through using multi-channel interventions for behaviour change communication. Incorporating aspects such user interaction, harnessing data that reveals how long a client has read the tool, time spent on a page to note the content they find appealing could provide vital information through the DST. The information may help counsellors prompt issues of interest for clients, together with concerns or needs expressed during the interactive process.

This is also while taking note of differing literacy levels of clients to ensure that DSTs incorporate other features that heighten understanding such as video and audio capabilities.

5.5 Further Research Recommendations

Decision is a process (Garvelink *et al.*, 2019) and follow up decisions will still be made by AGYW especially in oral PrEP uptake where interventions are new and burden like side effects may affect adherence. Further research may be conducted to understand the DST influence beyond just initiation, to evaluate adherence dynamics and challenges such as the burden of side-effects or other factors may pose.

While the focus here has been on AGYW, it would be beneficial for future inquiries to also engage providers to explore their perceptions and experiences on PrEP service delivery that include using the DST and counselling.

Having a similar study deployed in a different area such as a rural setting where respondents may likely not have the same aptitude with online or digital tool use. Having study participants from a different demography such as different age groups to note their response on the intervention would provide another lens in understanding DST input for supporting health decisions. Furthermore, a study setting that is outside a clinical setting would be beneficial to explore varied community level experiences, inclusive of people who may not have health seeking behaviour.

6. References

Archer, S. *et al.* (2020) 'Evaluating Clinician Acceptability of the Prototype CanRisk Tool for Predicting Risk of Breast and Ovarian Cancer: A Multi-Methods Study', *PLoS ONE*, 15(3). Available at: <https://doi.org/10.1371/journal.pone.0229999>.

Baggaley, R. *et al.* (2012) 'From Caution to Urgency: The Evolution of HIV Testing and Counselling in Africa', *Bulletin of the World Health Organization*, 90(9). Available at: <https://doi.org/10.2471/BLT.11.100818>.

Bajunirwe, F., Semakula, D. and Izudi, J. (2020) 'Risk of HIV Infection Among Adolescent Girls and Young Women in Age-Disparate Relationships in Sub-Saharan Africa', *AIDS*, 34(10), pp. 1539–1548. Available at: <https://doi.org/10.1097/QAD.0000000000002582>.

Butler, V. *et al.* (2023) 'Implementing Differentiated and Integrated HIV Prevention Services for Adolescent Girls and Young Women: Experiences From Oral PrEP Rollout in Primary Care Services in South Africa', *Journal of Adolescent Health*, 73(6), pp. S58–S66. Available at: <https://doi.org/10.1016/J.JADOHEALTH.2023.09.003>.

Celum, C. *et al.* (2023) 'A decision support tool has similar high PrEP uptake and increases early PrEP persistence in adolescent girls and young women in South Africa: results from a randomized controlled trial', *Journal of the International AIDS Society*, 26(8), p. e26154. Available at: <https://doi.org/10.1002/JIA2.26154>.

Celum, C.L. *et al.* (2015) 'Rethinking HIV Prevention to Prepare for Oral PrEP Implementation for Young African Women', *Journal of the International AIDS Society*. International AIDS Society. Available at: <https://doi.org/10.7448/IAS.18.4.20227>.

Celum, C.L. *et al.* (2019) 'HIV pre-exposure prophylaxis for adolescent girls and young women in Africa: from efficacy trials to delivery'. Available at: <https://doi.org/10.1002/jia2.25298/full>.

Celum, C.L. *et al.* (2022) 'PrEP use and HIV seroconversion rates in adolescent girls and young women from Kenya and South Africa: the POWER demonstration project', *Journal of the International AIDS Society*, 2022, p. 25962. Available at: <https://doi.org/10.1002/jia2.25962/full>.

Chebet, J.J. *et al.* (2023) 'Motivations for Pre-Exposure Prophylaxis Uptake and Decline in an HIV-hyperendemic Setting: Findings from a Qualitative Implementation Study in Lesotho', *AIDS Research and Therapy*, 20(1).

Available at: <https://doi.org/10.1186/s12981-023-00535-x>.

Chimbindi, N. *et al.* (2018) 'Persistently high incidence of HIV and poor service uptake in adolescent girls and young women in rural KwaZulu-Natal, South Africa prior to DREAMS'.

Available at: <https://doi.org/10.1371/journal.pone.0203193>.

Cowan, F.M. *et al.* (2016) 'PrEP implementation research in Africa: what is new?', *Journal of the International AIDS Society*, 19(6), pp. 1–11.

Available at: <https://doi.org/10.7448/IAS.19.7.21101>.

Desrosiers, A. *et al.* (2019) 'A Randomized Controlled Pilot Study of a Culturally-Tailored Counseling Intervention to Increase Uptake of HIV Pre-exposure Prophylaxis Among Young Black Men Who Have Sex with Men in Washington, DC', *AIDS and Behavior*, 23(1), pp. 105–115.

Available at: <https://doi.org/10.1007/s10461-018-2264-5>.

Duby, Z. *et al.* (2022) "'I Can't Go to Her When I Have a Problem': Sexuality Communication Between South African Adolescent Girls and Young Women and Their Mothers', *Sahara J*, 19(1), pp. 8–21.

Available at: <https://doi.org/10.1080/17290376.2022.2060295>.

Duby, Z. *et al.* (2023) "'These Girls Have a Chance to be the Future Generation of HIV Negative': Experiences of Implementing a PrEP Programme for Adolescent Girls and Young Women in South Africa', *AIDS and Behavior*, 27(1), pp. 134–149.

Available at: <https://doi.org/10.1007/s10461-022-03750-1>.

Elwyn, G. *et al.* (2013) "'Many Miles To Go.': A Systematic Review of The Implementation of Patient Decision Support Interventions into Routine Clinical Practice', *BMC Medical Informatics and Decision Making*. BioMed Central Ltd.

Available at: <https://doi.org/10.1186/1472-6947-13-S2-S14>.

Emmanuel, G. *et al.* (2020) 'Community Perspectives on Barriers and Challenges to HIV Pre-Exposure Prophylaxis Access by Men Who Have Sex with Men and Female Sex Workers Access in Nigeria', *BMC Public Health*, 20(1), pp. 1–10.

Available at: <https://doi.org/10.1186/S12889-020-8195-X/TABLES/3>.

Fang, M.L. *et al.* (2019) 'Exploring Privilege in the Digital Divide: Implications for Theory, Policy, and Practice', *Gerontologist*, 59(1), pp. E1–E15.

Available at: <https://doi.org/10.1093/geront/gny037>.

Ferguson, J.B. and UNICEF (2021) *Assessing the Vulnerability and Risks of Adolescent Girls and Young Women in Eastern and Southern Africa: A Review of the Tools in Use*.

Fickling, B.L. (2021) *Xenophobia in the Headlines: An Analysis of News Media Coverage of the Xenophobic Protests in Jeppestown*. Johannesburg.

Available at: <https://wiredspace.wits.ac.za/server/api/core/bitstreams/1117faab-1290-409b-8ec8-df7faf39a637/content>.

Friederici, N., Ojanperä, S. and Graham, M. (2017) 'The Impact of Connectivity in Africa: Grand Visions and the Mirage of Inclusive Digital Development', *Electronic Journal of Information Systems in Developing Countries*, 79(1), pp. 1–20.

Available at: <https://doi.org/10.1002/j.1681-4835.2017.tb00578.x>.

Garvelink, M.M. *et al.* (2019) 'Decisional Conflict Scale Findings among Patients and Surrogates Making Health Decisions: Part II of an Anniversary Review', *Medical Decision Making*, 39(4), pp. 315–326.

Available at: https://doi.org/10.1177/0272989X19851346/SUPPL_FILE/APPENDIX_1_INCLUDED_PAPER_2.RJF_ONLINE_SUPP.DOCX.

George, G. *et al.* (2014) 'Barriers and Facilitators to the Uptake of Voluntary Medical Male Circumcision (VMMC) Among Adolescent Boys in KwaZulu–Natal, South Africa', *African Journal of AIDS Research*, 13(2), pp. 179–187.

Available at: <https://doi.org/10.2989/16085906.2014.943253>.

George, G. *et al.* (2020) 'Evaluating DREAMS HIV Prevention Interventions Targeting Adolescent Girls and Young Women in High HIV Prevalence Districts in South Africa: Protocol for a Cross-Sectional Study', *BMC Women's Health*, 20(7), pp. 1–11.

Available at: <https://doi.org/10.1186/s12905-019-0875-2>.

George, G. *et al.* (2022) 'Determining HIV risk for Adolescent Girls and Young Women (AGYW) in relationships with "Blessers" and age-disparate partners: a cross-sectional survey in four districts in South Africa', *BMC Public Health*, 22(1), pp. 1–8.

Available at: <https://doi.org/10.1186/S12889-022-13394-4/TABLES/3>.

Govender, K. *et al.* (2013) 'Voluntary Medical Male Circumcision in South Africa: Circumcision in South Africa', *SAHR*, 14(2013), pp. 127–137.

Available at: <https://doi.org/10.10520/EJC161444>.

Groarke, J.M. *et al.* (2019) 'Examining the Impact of A Personalized Self-Management Lifestyle Program Using Mobile Technology on the Health and Well-Being of Cancer Survivors: Protocol and Rationale for a Randomized Controlled Trial (The Moving on Study)', *JMIR Research Protocols*, 8(8).

Available at: <https://doi.org/10.2196/13214>.

Heck, C.J. and Karim, A.A. (2022) 'Enhancing oral PrEP uptake among adolescent girls and young women in Africa', *Journal of the International AIDS Society*, 2022.

Available at: <https://doi.org/10.1002/jia2.25876/full>.

Hill, L.M. *et al.* (2022) 'Understanding PrEP Decision Making Among Pregnant Women in Lilongwe, Malawi: A Mixed-Methods Study', *Journal of the International AIDS Society*, 2022, p. 26007.

Available at: <https://doi.org/10.1002/jia2.26007/full>.

Huynh-Nhu, L. *et al.* (2016) 'Culturally Sensitive Approaches to Identification and Treatment of Depression among HIV Infected African American Adults: A Qualitative Study of Primary Care Providers' Perspectives', *Journal of Depression and Anxiety*, 05(02).

Available at: <https://doi.org/10.4172/2167-1044.1000223>.

IOM and UNAIDS (2003) 'Mobile Populations and HIV/AIDS in the Southern Africa Region'.

Available: at:

https://www.iom.int/sites/g/files/tmzbd1486/files/jahia/webdav/site/myjahiasite/shared/shared/mainsite/events/docs/Mobile_Populations_HIV_Southern_Africa.pdf

Jonas, K. *et al.* (2020) 'Perceptions of Contraception Services Among Recipients of a Combination HIV-Prevention Interventions for Adolescent Girls and Young Women in South Africa: A Qualitative Study', *Reproductive Health*, 17(122), pp. 1–14.

Available at: <https://doi.org/10.1186/s12978-020-00970-3>.

Kagaayi, J. and Serwadda, D. (2016) 'The history of the HIV/AIDS epidemic in Africa', *Current HIV/AIDS Reports*. Current Medicine Group LLC 1, pp. 187–193.

Available at: <https://doi.org/10.1007/s11904-016-0318-8>.

Kukafka, R. *et al.* (2009) 'Assessing the Need for An Online Decision-Support Tool to Promote Evidence-Based Practices of Psychosocial Counselling in HIV Care', *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV*, 21(1), pp. 103–108.

Available at: <https://doi.org/10.1080/09540120802033864>.

Lafferty, L. *et al.* (2024) 'Client and Staff Perceptions of Acceptability of MyCheck: A Direct-to-Pathology Telehealth and E-testing Service for Comprehensive Bloodborne Virus and Sexually Transmissible Infection Screening', *Sexual health*, 21.

Available at: <https://doi.org/10.1071/SH23194>.

Lanham, M. *et al.* (2021) 'Health Care Providers' Attitudes Toward and Experiences Delivering Oral PrEP to Adolescent Girls and Young Women in Kenya, South Africa, and Zimbabwe', *BMC Health Services Research*, 21(1).

Available at: <https://doi.org/10.1186/s12913-021-06978-0>.

Leah, D. *et al.* (2021) 'Early Pre-Exposure Prophylaxis (PrEP) Discontinuation Among Pregnant and Postpartum Women: Implications for Maternal PrEP Roll Out in South Africa'.

Available at: <https://doi.org/10.1101/2021.05.04.21256514>.

Lewis, L. *et al.* (2022) 'HIV incidence and associated risk factors in adolescent girls and young women in South Africa: A population-based cohort study', *PLoS ONE*, 17

Available at: <https://doi.org/10.1371/JOURNAL.PONE.0279289>.

Mabaso, M. *et al.* (2018) 'Determinants of HIV infection among adolescent girls and young women aged 15-24 years in South Africa: a 2012 population-based national household survey', *BMC Public Health*, 18(183), pp. 1–7.

Available at: <https://doi.org/10.1186/s12889-018-5051-3>.

MacDonald, J. *et al.* (2023) 'Improving HIV pre-exposure prophylaxis (PrEP) adherence and retention in care: Process evaluation and recommendation development from a nationally implemented PrEP programme', *PLoS ONE*, 18(10).

Available at: <https://doi.org/10.1371/journal.pone.0292289>.

Mack, N. *et al.* (2014) 'Barriers and facilitators to pre-exposure prophylaxis (PrEP) eligibility screening and ongoing HIV testing among target populations in Bondo and Rarieda, Kenya: Results of a consultation with community stakeholders', *BMC Health Services Research*, 14(1).

Available at: <https://doi.org/10.1186/1472-6963-14-231>.

Makoe, M. *et al.* (2022) 'Structural violence in South African primary healthcare facilities: insights from discussions with adolescents and young people seeking sexual and reproductive health needs', *International Journal of Qualitative Studies on Health and Well-being*, 17(1), p. 2056955.

Available at: <https://doi.org/10.1080/17482631.2022.2056955>.

Mampane, J.N. (2018) 'Exploring the "Blesser and Blessee" Phenomenon: Young Women, Transactional Sex, and HIV in Rural South Africa', *SAGE Open*, 8(4).

Available at: <https://doi.org/10.1177/2158244018806343>.

Manyazewal, T. *et al.* (2021) 'The potential use of Digital Health Technologies in the African Context: A Systematic Review of Evidence from Ethiopia', *Digital Medicine*. Addis Ababa: Nature Partner Journals, pp. 1–13.

Available at: <https://doi.org/10.1038/s41746-021-00487-4>.

Mboweni, R.F. and Sumbane, G.O. (2019) 'Factors contributing to delayed health seeking behaviours among adolescents', *Glob J Health Sci*, 11(13), p. 67.

Available at: <https://doi.org/10.5539/gjhs.v11n13p67>.

McClinton Appollis, T. *et al.* (2021) 'Factors influencing adolescent girls and young women's participation in a combination HIV prevention intervention in South Africa', *BMC Public Health*, 21(1).

Available at: <https://doi.org/10.1186/s12889-021-10462-z>.

Meyer, J. *et al.* (2021) 'Preference for and efficacy of a PrEP Decision Aid for Women with Substance Use Disorders', *Patient Preference and Adherence*, 15(2021), pp. 1913–1927. Available at: <https://doi.org/10.2147/PPA.S315543>.

Mistry, P. *et al.* (2022) *Using wearable devices to generate real-world, individual-level data in rural, low-resource contexts in Burkina Faso, Africa: A case study*.

Available at: <https://pubmed.ncbi.nlm.nih.gov/36249225/>

Morton, J.F. *et al.* (2020) 'Evaluation of a behavior-centered design strategy for creating demand for oral PrEP among young women in Cape Town, South Africa', *Gates Open Research*, 4, p. 29.

Available at: <https://doi.org/10.12688/GATESOPENRES.13103.2>.

Mourning, K. and Sibindi, F. (2000) *Responses to HIV in Zimbabwe*. Oxford.

Available at: <https://academic.oup.com/heapol/article/15/1/17/667620>.

Mthimkhulu, N. *et al.* (2024) 'Factors influencing the uptake of a mono-PrEP implant for the prevention of HIV: Males' perspectives from three South African provinces', *PLoS ONE*, 19(1 January).

Available at: <https://doi.org/10.1371/journal.pone.0296341>.

Muhumuza, R. *et al.* (2021) 'Exploring Perceived Barriers and Facilitators of PrEP Uptake among Young People in Uganda, Zimbabwe, and South Africa', *Archives of Sexual Behavior*, 50(4), p. 1729.

Available at: <https://doi.org/10.1007/S10508-020-01880-Y>.

Murewanhema, G. *et al.* (2022a) 'HIV and Adolescent Girls and Young Women in Sub-Saharan Africa: A call for Expedited Action to Reduce New Infections', *International Society for Infectious Diseases*, 5(2022), pp. 30–32.

Available at: <https://doi.org/10.1016/J.IJREGI.2022.08.009>.

Murewanhema, G. *et al.* (2022b) 'HIV and adolescent girls and young women in sub-Saharan Africa: A call for expedited action to reduce new infections', *IJID Regions*, 5, pp. 30–32.

Available at: <https://doi.org/10.1016/J.IJREGI.2022.08.009>.

Mwongeli, N. *et al.* (2022) "“PrEP Gives the Woman the Control”: Healthcare Worker Perspectives on Using pre-Exposure Prophylaxis (PrEP) During Pregnancy and Postpartum

in Kenya', *Original Research Article Journal of the International Association of Providers of AIDS Care*, 21, pp. 1–7.

Available at: <https://doi.org/10.1177/23259582221111068>.

Nader, C.M. *et al.* (2009) *Development of an Electronic Medical Record-Based Clinical Decision Support Tool to Improve HIV Symptom Management*.

Available at: <https://doi.org/10.1089/apc.2008.0209>.

Nakasone, S.E. *et al.* (2020) “They have this not care - Don’t care attitude.” A Mixed Methods Study Evaluating Community Readiness for Oral PrEP in Adolescent Girls and Young Women in a Rural Area of South Africa', *AIDS Research and Therapy*, 17(1), pp. 1–10.

Available at: <https://doi.org/10.1186/S12981-020-00310-2/FIGURES/1>.

Ngidi, N.D. *et al.* (2024) ‘Blesser relationships among orphaned adolescent girls in contexts of poverty and gender inequality in South African townships’, *PLOS ONE*, 19(10), p. e0299190.

Available at: <https://doi.org/10.1371/JOURNAL.PONE.0299190>.

Ngowi, K. *et al.* (2021) “I Wish to Continue Receiving the Reminder Short Messaging Service”: A Mixed Methods Study on the Acceptability of Digital Adherence Tools Among Adults Living with HIV on Antiretroviral Treatment in Tanzania', *Patient Preference and Adherence*, 15, pp. 559–568.

Available at: <https://doi.org/10.2147/PPA.S290079>.

Njuguna, I. *et al.* (2023) ‘Introduction and integration of PrEP and sexual and reproductive health services for young people: Health provider perspectives from South Africa', *Frontiers in Reproductive Health*, 4(1086558).

Available at: <https://doi.org/10.3389/frph.2022.1086558>.

Nyblade, L. *et al.* (2022) ‘Stigma in the Health Clinic and Implications for PrEP Access and Use by Adolescent Girls and Young Women: Conflicting Perspectives in South Africa', *BMC Public Health*, 22(1), pp. 1–11.

Available at: <https://doi.org/10.1186/S12889-022-14236-Z/TABLES/4>.

O’Connell, H.R. and Criniti, S.M. (2021) ‘The Impact of HIV Pre-Exposure Prophylaxis (PrEP) Counseling on PrEP Knowledge and Attitudes Among Women Seeking Family Planning Care', *Journal of Women’s Health*, 30(1), pp. 121–130.

Available at: <https://doi.org/10.1089/jwh.2019.8217>.

Ohno-Machado, L. *et al.* (1993) *A Decision-Support Tool for Decreasing Physicians' Uncertainty Regarding Patient Eligibility for HIV Treatment Protocols*. San Francisco.

Available at: <https://pubmed.ncbi.nlm.nih.gov/8130510/>

O'Rourke, S. *et al.* (2021) 'The PrEP Journey: Understanding How Internal Drivers and External Circumstances Impact The PrEP Trajectory of Adolescent Girls and Young Women in Cape Town, South Africa', *AIDS and Behavior*, 25(7), pp. 2154–2165.

Available at: <https://doi.org/10.1007/s10461-020-03145-0>.

Pavlova, N., Teychenne, M. and Olander, E.K. (2020) 'The Concurrent Acceptability of a Postnatal Walking Group: A Qualitative Study Using the Theoretical Framework of Acceptability', *International Journal of Environmental Research and Public Health*, 17(5027), pp. 1–9.

Available at: <https://doi.org/10.3390/ijerph17145027>.

Pilgrim, N. *et al.* (2018) 'Provider Perspectives on PrEP for Adolescent Girls and Young Women in Tanzania: The Role of Provider Biases and Quality of Care', *PLOS ONE*, 13(4), p. e0196280.

Available at: <https://doi.org/10.1371/JOURNAL.PONE.0196280>.

Pillay, D. *et al.* (2020) 'Factors Influencing Uptake, Continuation, and Discontinuation of Oral PrEP Among Clients at Sex Worker and MSM Facilities in South Africa', *PLoS ONE*, 15(4).

Available at: <https://doi.org/10.1371/journal.pone.0228620>.

Pintye, J. *et al.* (2021) 'Influences on Early Discontinuation and Persistence of Daily Oral PrEP Use Among Kenyan Adolescent Girls and Young Women: A Qualitative Evaluation From a PrEP Implementation Program', *Journal of Acquired Immune Deficiency Syndromes*, 86(4), pp. E83–E89.

Available at: <https://doi.org/10.1097/QAI.0000000000002587>.

Pleaner, M. *et al.* (2022) 'Introduction and Integration of PrEP and Sexual and Reproductive Health Services for Young People: Health Provider Perspectives from South Africa', *Frontiers in Reproductive Health*, 4, p. 1086558.

Available at: <https://doi.org/10.3389/FRPH.2022.1086558/BIBTEX>.

Ramsetty, A. and Adams, C. (2020) 'Impact of the Digital Divide in the Age of COVID-19', *Journal of the American Medical Informatics Association*. Oxford University Press, pp. 1147–1148.

Available at: <https://doi.org/10.1093/jamia/ocaa078>.

Rees, H. *et al.* (2017) 'At the Heart of the Problem: Health in Johannesburg's Inner-City', *BMC Public Health*, 17(3), pp. 1–6.

Available at: <https://doi.org/10.1186/S12889-017-4344-2/METRICS>.

Rogers, Z. *et al.* (2022) 'Key Influences on the Decision to Initiate PrEP among Adolescent Girls and Young Women within Routine Maternal Child Health and Family Planning Clinics in Western Kenya', *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV*, 34(3), pp. 363–370.

Available at: <https://doi.org/10.1080/09540121.2021.1981217>.

Rousseau, E., Bekker, L.-G., *et al.* (2021) 'A Community-Based Mobile Clinic Model Delivering PrEP for HIV Prevention to Adolescent Girls and Young Women in Cape Town, South Africa', *BMC Health Services Research*, 888(21).

Available at: <https://doi.org/10.1186/s12913-021-06920-4>.

Rousseau, E., Katz, A.W.K., *et al.* (2021) 'Adolescent girls and young women's PrEP-user journey during an implementation science study in South Africa and Kenya', *PLoS ONE*, 16(10 October).

Available at: <https://doi.org/10.1371/journal.pone.0258542>.

Sekhon, M., Cartwright, M. and Francis, J.J. (2017) 'Acceptability of Healthcare Interventions: An Overview of Reviews and Development of a Theoretical Framework', *BMC Health Services Research*, 17(1).

Available at: <https://doi.org/10.1186/s12913-017-2031-8>.

Sewell, W.C. *et al.* (2021) 'Patient-led Decision-Making for HIV Preexposure Prophylaxis', *Current HIV/AIDS reports*, 18(1), p. 48.

Available at: <https://doi.org/10.1007/S11904-020-00535-W>.

Shamu, S. *et al.* (2021) 'Pre-Exposure Prophylaxis (PrEP) Awareness, Attitudes and Uptake Willingness among Young People: Gender Differences and Associated Factors in two South African Districts', *Global Health Action*, 14(1).

Available at: <https://doi.org/10.1080/16549716.2021.1886455>.

Skinner, H. *et al.* (2003) 'How Adolescents Use Technology for Health Information: Implications for Health Professionals from Focus Group Studies', *J Med Internet Res* 2003;5(4):e32 <https://www.jmir.org/2003/4/e32>, 5(4), p. e20.

Available at: <https://doi.org/10.2196/JMIR.5.4.E32>.

Skovdal, M. *et al.* (2022) 'Improving Access to Pre-Exposure Prophylaxis for Adolescent Girls and Young Women: Recommendations from Healthcare Providers in Eastern Zimbabwe', *BMC Infectious Diseases*, 22(1).

Available at: <https://doi.org/10.1186/s12879-022-07376-5>.

Smuck, M. *et al.* (2021) 'The emerging clinical role of wearables: factors for successful implementation in healthcare', *npj Digital Medicine*. Nature Research.

Available at: <https://doi.org/10.1038/s41746-021-00418-3>.

Stacey, D. *et al.* (2017) 'Decision Aids for People Facing Health Treatment or Screening Decisions', *The Cochrane Database of Systematic Reviews*, 2017(4), p. CD001431.

Available at: <https://doi.org/10.1002/14651858.CD001431.PUB5>.

Storeng, K.T. *et al.* (2021) 'Digital Technology and the Political Determinants of Health Inequities: Special Issue Introduction', *Global Policy*. John Wiley and Sons Inc, pp. 5–11.

Available at: <https://doi.org/10.1111/1758-5899.13001>.

Tawodzera, G. and Crush, J. (2023) "A Foreigner is not a Person in this Country": Xenophobia and the Informal Sector in South Africa's Secondary Cities', *Urban Transformations* 2023 5:1, 5(1), pp. 1–16.

Available at: <https://doi.org/10.1186/S42854-022-00046-4>.

Timm Id, L. *et al.* (2022) 'Application of the Theoretical Framework of Acceptability to Assess a Telephone-Facilitated Health Coaching Intervention for the Prevention and Management of Type 2 Diabetes', *PLOS One* , 17(10), pp. 1–15.

Available at: <https://doi.org/10.1371/journal.pone.0275576>.

Torres, V.N. *et al.* (2020) 'Participant Satisfaction and Acceptability of a Culturally Adapted Brief Intervention to Reduce Unhealthy Alcohol Use Among Latino Immigrant Men', *American Journal of Men's Health*, 14(3).

Available at: <https://doi.org/10.1177/1557988320925652>.

Tshuma, S. *et al.* (2017) *mHealth and Young People in South Africa*. Johannesburg.

UNAIDS (2016) *Putting HIV Prevention Among Adolescent Girls and Young Women on the Fast-Track and Engaging Men and Boys*. Geneva.

Available at: https://www.unaids.org/sites/default/files/media_asset/UNAIDS_HIV_prevention_among_adolescent_girls_and_young_women.pdf

UNAIDS (2022) *In Danger: UNAIDS Global AIDS Update 2022*. Geneva.

Available at: https://www.unaids.org/sites/default/files/media_asset/2022-global-aids-update-summary_en.pdf

UNAIDS (2024) '2024 Global AIDS Report — The Urgency of Now: AIDS at a Crossroads', *Joint United Nations Programme on HIV/AIDS* [Preprint], (1).

Available at: <http://www.wipo.int/>

Wamoyi, J. *et al.* (2016) 'Transactional Sex and Risk for HIV Infection in Sub-Saharan Africa: A Systematic Review and Meta-Analysis', *Journal of the International AIDS Society*, 19(1), p. 20992.

Available at: <https://doi.org/10.7448/IAS.19.1.20992>.

Wang, T., Guo, X. and Wu, T. (2021) 'Social Capital and Digital Divide: Implications for Mobile Health Policy in Developing Countries', *Journal of Healthcare Engineering*, 2021.

Available at: <https://doi.org/10.1155/2021/6651786>.

Waselewski, M. *et al.* (2024) 'Youth Preferences for Healthcare Providers and Healthcare Interactions: A Qualitative Study', *BMC Primary Care*, 25(1), pp. 1–9.

Available at: <https://doi.org/10.1186/S12875-024-02300-Z/TABLES/2>.

WHO (2016) *Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection: Recommendations for a Public Health Approach*. Geneva.

WHO (2020) 'Youth-Centred Digital Health Interventions: A Framework for Planning, Developing and Implementing Solutions with and for Young People'. Geneva,

Williams, B. *et al.* (2000) 'The Natural History of HIV/AIDS in South Africa: A Biomedical and Social Survey in Carletonville', *CSIR*, 1(1), pp. 1–218.

Available at: www.csir.co.za/aidsproject/

Wilton, J. *et al.* (2016) 'Use of an HIV-Risk Screening Tool to Identify Optimal Candidates for PrEP Scale-Up among Men who have Sex with Men in Toronto, Canada: Disconnect between Objective and Subjective HIV Risk', *Journal of the International AIDS Society*, 19(1).

Available at: <https://doi.org/10.7448/IAS.19.1.20777>.

Yam, E. and McClair, T. (2021) 'Advancing Integrated Family Planning /HIV Counseling with Evidence (ADVICE): Review of FP Decision Support Tools and HIV Vulnerability Assessment Tools', *Population Council* [Preprint].

Available at: https://knowledgecommons.popcouncil.org/departments_sbsr-hiv.

Yao, R. *et al.* (2022) 'Inequities in Health Care Services Caused by the Adoption of Digital Health Technologies: Scoping Review', *Journal of Medical Internet Research*. JMIR Publications Inc.

Available at: <https://doi.org/10.2196/34144>.

APPENDIX ONE

PLAGIARISM DECLARATION



PLAGIARISM DECLARATION TO BE SIGNED BY ALL HIGHER DEGREE STUDENTS

SENATE PLAGIARISM POLICY: APPENDIX ONE

I Senziwani Ndlovu (Student number: 1713512) am a student registered for the degree of MPH-SBCC (MCA 17) in the academic year 3rd.

I hereby declare the following:

- I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong.
- I confirm that the work submitted for assessment for the above degree is my own unaided work except where I have explicitly indicated otherwise.
- I have followed the required conventions in referencing the thoughts and ideas of others.
- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.
- I have included as an appendix a report from "Turnitin" (or other approved plagiarism detection) software indicating the level of plagiarism in my research document.

Signature:

Date:

07 October 2025

APPENDIX TWO

INFORMATION SHEET FOR POWER WOMEN'S INTERVIEW AT THE JEPPESTOWN CLINIC

**A cohort for evaluation of open-label PrEP delivery among Kenyan and South
African women: *The POWER cohort***

Version 1.0

1 March 2018

PRINCIPAL INVESTIGATOR:

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We are asking you to participate in an interview as part of the POWER cohort research study. Before you decide if you want to be interviewed, we will tell you the purpose of the interviews, the risks and benefits, and what you would do if you are in the study. This study is sponsored by the University of Washington and the United States Agency for International Development, which are located in the USA.

PURPOSE OF THE STUDY

The purpose of this study is to learn more about young women's choices about HIV prevention and about how health information can support their decision making. Up to 20 women enrolled in the POWER cohort study will be asked to participate in an interview at the Jeppestown clinic.

You do not have to participate in an interview if you do not want to. If you choose to be interviewed, you may stop at any time, without any consequences or losing your right to access care at this clinic.

STUDY PROCEDURES

If you decide to participate in an interview, you will read, discuss, and sign or make your mark on this form. You will be asked to participate in a discussion with a research staff member at a mutually acceptable location at a time convenient for you. During the interview, we will ask you some questions about your opinions of the HIV prevention information and counseling you received and how you make decisions about your sexual and reproductive health. An interview will take no more than two hours. We will audio-record the interviews so we can write them down later. We will destroy the recording after we publish the research findings no later than September 2021.

All of the information that is collected will be stored electronically on a secure data server. The information will be private and password-protected and will only be accessible to authorised study investigators in Johannesburg and in the USA.

RISKS, BENEFITS, AND COSTS TO YOU

During the interview, we may ask you some questions that cause you to feel embarrassed or uncomfortable. You may choose not to answer questions in the interview at any time.

There are no direct benefits to participating in this study. However, the information you provide may help researchers better understand how women make decisions about HIV prevention.

There is no cost to you for being in this study.

If you feel you have been injured because of being in this study, it is important that you tell us. We will offer you free care at the study clinic for injuries you feel happened because of being in the study. This institution does not provide a monetary compensation program. If you need medical care that we cannot provide, we will refer you to the appropriate services or organizations that can provide care for the injury.

REIMBURSEMENT

You will receive R100.00 for your time, effort, and transportation to the interview today.

CONFIDENTIALITY

The study staff will make every effort to protect your privacy and confidentiality, however, absolute confidentiality cannot be guaranteed, and it is possible that others may learn of your participation in the study, and because of this, may treat you unfairly or discriminate against you. To reduce the risk of this, we will strictly protect the information recorded during your interview. The audio recording including your voice, the interviewer's notes, and analyses from these materials will be kept confidential. This means that no one other than the POWER research team will have access to your responses. The information that links you to research materials will be kept in a secure location. Your voice recordings will also be kept in a secure location and only people involved with the study will have access to these recordings. We will not use your name or identify you personally in any publication.

PROBLEMS OR QUESTIONS

If you ever have any questions about this study or have an injury because of the study, please contact the Project Manager, Dr Danielle Travill at 011 358 5547, dtravill@wrhi.ac.za or the primary investigators in Johannesburg, Dr John Imrie, Co-Investigator, 011 358 5525, jimrie@wrhi.ac.za, or Prof Sinead Delany-Moretlwe, Principal Investigator, 011 358 5414, sdelany@wrhi.ac.za

If you have questions about your rights as a study participant or feel that you have not been treated fairly, you can contact Prof. Peter Cleaton-Jones, Chairperson of the University of the Witwatersrand, Human Research Ethics Committee (HREC) at 011 717 2301. The HREC is an independent committee established to help protect the rights of research participants.

INFORMED CONSENT AUTHORISATION FOR PARTICIPANTS

I have read this form or had it read to me. I have discussed the information with study staff. My questions have been answered. It is clear that my choice about being in the

study is voluntary. It is clear that if I choose to be in the study I may stop at any time. By signing this form, I do not give up any of my legal rights as a study participant.

I have read the information provided above. I have asked all the questions I have at this time.

APPENDIX THREE

CONSENT FORM FOR POWER WOMEN'S INTERVIEW AT THE JEPPESTOWN CLINIC

I voluntarily agree for the interview to be audiotaped. I understand that the audio files will be destroyed by 2021.

Printed name of participant

Signature of participant

Date

Printed name of study staff person obtaining consent

Signature of person obtaining consent

Date

If the participant is illiterate:

APPENDIX FOUR

DECISION SUPPORT TOOL INTERVIEW GUIDE

Interview guide for young women participants

Thank you for agreeing to participate in this interview today. My name is [name], and I will be interviewing you today. We are going to be talking about your experience at the clinic today in relation to HIV prevention and family planning. There are no right or wrong answers, and we want to learn from your opinions. If you are not sure or do not feel comfortable with a question, you do not have to respond. With your permission, I am going to record this interview. Your name and other identifying information will not be saved with the recording, and this recording will be shared only with the study team. I'm going to start recording now, is that okay?

[Start recording. **Italicized questions are only for participants randomized to the decision support tool.**]

Background

1. Can you please tell me the reason/s you visited the clinic today (or 'the other day' _if the interview day is different from enrolment day?
2. What kind of services did you expect to receive?
3. Please tell me what happened during your visit from start to finish. a. Who did you see; what did you do; what information did you look at; for example pamphlets, posters, anything else?
b. Did you expect to receive information about HIV prevention and family planning? [If yes or no] explain why?
c. [If not] How did you feel after receiving this information since you were not expecting it?

Tablet and PrEP decision support tool

As part of your enrolment in the study, you were given a tablet/ Ipad. Some people were shown an app that was about HIV prevention called the PrEP decision tool. The following questions are about your experience using the tablet with or without the PrEP decision tool.

4. Can you please tell me about your experience using the tablet to access health information?
a. How do you think your friends would feel about using the tablet?
b. Do you think the clinic should continue to use the tablet? Why/why not?
c. If the information on the tablet was available to you on your phone outside of the clinic, do you think you or your friends would use it?

- When would you use it?

2. What kind of information did you access/ read in the tablet?

- HIV prevention? Family planning? a. *What was that like for you?*

b. *What do you remember most from the information you read?*

c. *What was it that you **liked/did not like** from the information you read?*

d. *Was there anything **confusing; surprising; missing**?*

Note: For participants randomized to decision tool only who say they read HIV prevention #6.

6. Did you go through the information on the tablet about family planning? a. *What was that like for you?*

b. *What do you remember most from the information you read?*

c. *What is it that you **liked or did not like** about the information you read?*

d. *Was there anything **confusing; surprising; Missing**?*

7. *How did the information on the tablet affect your understanding of HIV prevention?*

8. *How did the information on the tablet affect your understanding of family planning?*

9. *In what ways do you think access to HIV prevention and/or family planning information on the tablet before your visit affected your conversation with the counsellor/nurse?*

10. *How useful was the information in helping you make decisions about taking or not taking PrEP? Please describe: a. Specifically, what information within the PrEP decision tool helped you decide?*

11. *How useful was the PrEP decision tool in helping you make decisions about family planning? Please describe: a. Specifically, what information within the PrEP decision tool helped you decide?*

12. *How would you prefer to receive the HIV prevention and family planning information that you accessed on the tablet? a. From a counsellor? Nurse? Pamphlet? A phone call or SMS? Video? Tablet? Anything else?*

Interaction with health providers [All participants]

13. Can you tell me about your experience interacting with the counsellor or nurse? (Probe for both Jeppestown and POWER providers)

14. Tell me about the conversation you had with a counsellor/nurse about HIV prevention and family planning. a. What did you like/dislike with each provider?

a. What did you like/dislike with each provider?

b. Did she/he make a recommendation to you about an HIV prevention or family planning method?

c. How did that make you feel?

d. Did the Jeppestown provider talk to you about PrEP? If so, was that enough information for you to make a decision about if PrEP is right for you?

e. *What if you just saw the Jeppestown provider and the decision support tool. Would that have given you enough information about PrEP to decide if its right for you? Why / why not?*

f. What questions did you ask about? *Did any questions come up from the tablet?* **[For randomized participants only]**

a. Do you want them to tell you about all the options and let you chose?

b. Do you want them to tell you about only methods that you have questions about?

c. Do you want them to tell you about all the options and then you make a decision together?

d. Do you want them to make a recommendation to you about what you should use?

15. Tell me about how you'd like to talk to a nurse or counsellor about HIV prevention or family planning?

16. How could we have improved your visit today concerning HIV prevention and family planning care?

17. Do you have anything else to add?

Thank-you for your time. As a reminder, everything said here today is confidential.

APPENDIX FIVE

DST PARTICIPANTS PSEUDONYMS

Primary Study Identification	Secondary Study
220317	Hazel
220367	Bongiwe
220342	Bahle
220139	Lerato
220381	Prudence
220318	Soneni
220404	Thandiwe
220422	Musa
220319	Lungile
220403	Zandile

APPENDIX SIX
DST STUDY ETHICS CLEARANCE

 UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG	HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
---	--

Office of the Deputy Vice-Chancellor (Research and Innovation)

TO: Ms S Ndlovu
School of Public Health
Faculty of Health Sciences
University

E-mail: senziwani@gmail.com

CC: Supervisor: Drs J White and MN Ndimande-Khoza
Janine.White@wits.ac.za
and <HREC-Medical Research Office@wits.ac.za>

FROM: Mr Iain Burns
Human Research Ethics Committee (Medical)
Tel: 011 717 1252

E-mail: Iain.Burns@wits.ac.za

DATE: 11 July 2024

REF: R14/49

PROTOCOL NO: **M240433** (This is your ethics application reference number. Please quote it in all enquiries, oral or written, relating to this study.)

PROJECT TITLE: *Exploring experiences of the My PrEP decision support tool and counselling services amongst adolescent girls and young women in Johannesburg*

Please find attached the Clearance Certificate for the above project. I hope it goes well and that an article in a recognized publication comes out of it. This will reflect well on your professional standing and contribute to Government funding of the University.



MSWorks2000/Iain0007/Clearscan.wps

APPENDIX SEVEN

PRIMARY STUDY ETHICS CLEARANCE



R14/49 Prof Sinead Delany-Moretlwe

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M180789

NAME: Prof Sinead Delany-Moretlwe
(Principal Investigator)
DEPARTMENT: Wits Reproductive Health and HIV Research Institute
Jeppe's Clinic, in Region F, City of Johannesburg
PROJECT TITLE: An evaluation of methods to improve the decision to initiate
PrEP among young women in South Africa
A sub-study for: The POWER Cohort
DATE CONSIDERED: Ad hoc
DECISION: Approved unconditionally
CONDITIONS: A Sub-study under Primary Study M161187
Prof Sinead Delany-Moretlwe et al
SUPERVISOR:

APPROVED BY:


Professor CB Penny, Chairperson, HREC (Medical)

DATE OF APPROVAL: 06/08/2018

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary on the Third Floor, Faculty of Health Sciences, Phillip Tobias Building, 29 Princess of Wales Terrace, Parktown, 2193, University of the Witwatersrand. I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. I agree to submit a yearly progress report. The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed in July and will therefore be due in the month of July each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Principal Investigator Signature _____

Date _____

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

APPENDIX EIGHT

JIAS MANUSCRIPT GUIDELINE

Manuscript title

Commented [A1]: For guidelines on preparing your submission: [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1758-2652/homepage/ForAuthors.html#PS](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1758-2652/homepage/ForAuthors.html#PS)

FirstName MiddleName LastName^{1*}, FirstName MiddleName LastName^{2*}, FirstName MiddleName LastName^{3§}

Commented [A2]: List authors here. E.g. John P. Smith.

Commented [A3]: E.g. Mary J. Collins

Commented [A4]: E.g. Bob T. Lee

1 Department, Institution, City, Country

2 Department, Institution, City, Country

3 Department, Institution, City, Country

Commented [A5]: Details of authors' affiliations. E.g. Department of Child Health, General Hospital, New Delhi, India

§ Corresponding author: FirstName MiddleName LastName

Commented [A6]: E.g. Bob T. Lee

Street Name

City, Postal Code, Country

Phone number

Email

Commented [A7]: E.g.:

5, Main Street,
Washington, DC 54201, USA
Phone: 001 202 555 3546
Email: Author3@email.com

*These authors have contributed equally to the work.

Commented [A8]: Indicate with asterisks where authors have contributed equally to the manuscript. This is often used for shared first authorship.

E-mail addresses of authors:

JS: author1@email.com

Commented [A9]: Author 1 initials

MC: author2@email.com

Commented [A10]: Author 2 initials

BL: author3@email.com

Commented [A11]: Author 3 initials

Keywords:

Commented [A12]: Insert here 6 keywords related to your manuscript

Word count:

Abstract: xx/350 Headings: Introduction, Methods, Results, Conclusions

Commented [A13]: Insert word count of abstract here

Main text: xx/5000 words; tables with quotes contribute to the word count; mixed and multiple methods reports may be included if there is a substantial qualitative component

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1 **Abstract**

2 **Introduction:** Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia
3 crebra urbes duae faciunt claram Salamis et Paphus, altera Iovis delubris altera Veneris templo
4 insignis. tanta autem tamque multiplici fertilitate abundat rerum omnium eadem Cyprus ut nullius
5 externi indigens adminiculi indigenis viribus a fundamento ipso carinae ad supremos usque
6 carbasos aedificet onerariam navem.

7

8 **Methods:** Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia
9 crebra urbes duae faciunt claram Salamis et Paphus, altera Iovis delubris altera Veneris templo
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11 externi indigens adminiculi indigenis viribus a fundamento ipso carinae ad supremos usque
12 carbasos aedificet onerariam navem omnibusque armamentis instructam mari committat.

13

14 **Results:** Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia crebra
15 urbes duae faciunt claram Salamis et Paphus, altera Iovis delubris altera Veneris templo insignis.
16 tanta autem tamque multiplici fertilitate abundat rerum omnium eadem Cyprus ut nullius externi
17 indigens adminiculi indigenis viribus a fundamento ipso carinae ad supremos usque carbasos
18 aedificet onerariam navem omnibusque armamentis instructam mari committat.

19

20 **Conclusions:** Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia
21 crebra urbes duae faciunt claram Salamis et Paphus, altera Iovis delubris altera Veneris templo
22 insignis. tanta autem tamque multiplici fertilitate abundat rerum omnium eadem Cyprus ut nullius
23 externi indigens adminiculi indigenis viribus a fundamento ipso.

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25 **Clinical Trial Number:** xxxx

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28 Introduction

29 Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia crebra urbes
30 duae faciunt claram Salamis et Paphus, altera Iovis delubris altera Veneris templo insignis [1].
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33 aedificet onerariam navem omnibusque armamentis instructam mari committat [2].

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48 indigens adminiculi indigenis viribus a fundamento ipso.

50 Methods

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51 Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia crebra urbes
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60 **Subheading**

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61 Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia crebra urbes
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65 **Subheading**

66 Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia crebra urbes
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69 indigens adminiculi indigenis viribus a fundamento ipso.

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71 **Results**

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72 Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia crebra urbes
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75 indigens adminiculi indigenis viribus a fundamento ipso (Table 1).

76

Commented [A21]: Tables are numbered consecutively and have to be mentioned in the text.

77 **Table 1. Title of Table**

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Variable	Number
Characteristic 1	1*
Characteristic 2	10
Characteristic 3	100
Characteristic 4	1000

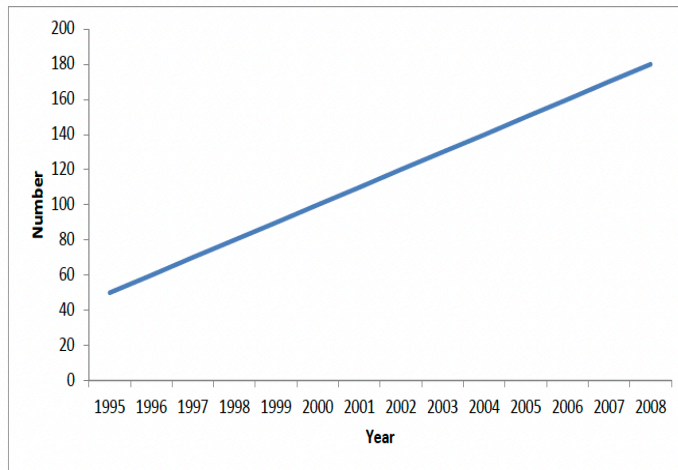
78 Legend of table: *explanation here

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80 Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia crebra urbes
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86 **Figure 1. Title of Figure.** Brief description of figure here.

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88 Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia crebra urbes
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 91 indigens adminiculi indigenis viribus a fundamento ipso.

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93 Discussion

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 101 autem tamque multiplici fertilitate abundat rerum omnium eadem Cyprus ut nullius externi
 102 indigens adminiculi indigenis viribus a fundamento ipso.

Commented [A24]: Figures should be clearly labeled, for example all axes in a graph. [Click here](#) for the basic figure requirements for figures submitted with manuscripts for initial peer review, as well as the more detailed post-acceptance figure requirements.

103

104 Cyprum itidem insulam procul a continenti discretam et portuosam inter municipia crebra urbes
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112 indigens adminiculi indigenis viribus a fundamento ipso.

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115 **Conclusions**

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121 **Word limit: 3500 words**

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APPENDIX NINE

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JAWhite 28 March 2025

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