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To cite this article: Constance Matshidiso Lelaka & Olaide Olawumi Ojoniyi (2024) The perceptions and experiences of facility managers in the implementation of safer conception services in public health care facilities, *Journal of Human Behavior in the Social Environment*, 34:7, 993-1009, DOI: [10.1080/10911359.2024.2314016](https://doi.org/10.1080/10911359.2024.2314016)

To link to this article: <https://doi.org/10.1080/10911359.2024.2314016>



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Published online: 05 Mar 2024.



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The perceptions and experiences of facility managers in the implementation of safer conception services in public health care facilities

Constance Matshidiso Lelaka ^a and Olaide Olawumi Ojoniyi ^b

^aThe Discipline of Social Work, School of Human & Community Development, University of the Witwatersrand, Johannesburg, South Africa; ^bDepartment of Statistics and Population Studies, University of the Western Cape, Cape Town, South Africa

ABSTRACT

Safer Conception Services (SCS) refers to the provision of a package of care for individuals of reproductive age who are affected with HIV to have safe and healthy pregnancies. South Africa has one of the highest HIV burdens in the world, yet limited availability of SCS. Therefore, this study investigated healthcare managers' response to an implementation project piloting SCS integration into primary healthcare services in Johannesburg. As part of the implementation study, data was collected from six facility healthcare managers using In-Depth interviews between November 2017 - September 2018. Data were analyzed using thematic analysis. The following four (4) themes emerged: positive response to the implementation of SCS, capacity building, the impact of SCS, and the need to scale up SCS. The results suggested that providers engaged saw value in the implementation of SCS. The results further suggest that there was an openness, willingness, cheerful outlook, and support to make SCS more widely available; however, streamlined processes are important to ensure feasibility. Continuous training is necessary to routinize implementation and ensure adequate coverage of services. Available guidelines should be translated into training programs and more initiative-taking policies to support the scale-up of this essential service.

KEYWORDS

Experiences facility managers; implementation; perceptions; public health care facilities; safer conception services

Introduction

Safer Conception Services (SCS) refer to a comprehensive package of interventions designed to minimize the risk of HIV transmission between partners while supporting their desire to conceive a child. These services encompass a range of strategies, including pre-conception counseling, access to antiretroviral therapy (ART), suppression of viral load, prevention and treatment of STIs, timed condomless intercourse, assisted reproductive technologies, and pre-exposure prophylaxis (PrEP) (Bekker et al., 2011). The objective is to enable individuals and couples affected by HIV/AIDS to make informed decisions about starting or expanding their families while reducing the risk of transmitting the virus to their partners or offspring.

CONTACT Constance Matshidiso Lelaka  tshidi.lelaka@wits.ac.za  The Discipline of Social Work, School of Human & Community Development, University of the Witwatersrand, Johannesburg 2000, South Africa.

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The concept of Safer Conception Services emerged in the early 2000s as a response to the reproductive rights and desires of people living with HIV/AIDS. Initially, the focus was on providing counseling and guidance around sexual and reproductive health. However, over time, the approach has evolved to include biomedical interventions such as ART and PrEP, which have demonstrated efficacy in reducing transmission risks (Gruskin et al., 2007; Matthews & Mukherjee, 2009). The integration of SCS into existing HIV care and family planning services has gained momentum, leading to improved access and uptake of these services (Joseph Davey et al., 2018).

Research studies have shown promising results regarding the effectiveness of Safer Conception Services in preventing HIV transmission while promoting safe conception (Patwa et al., 2019). Studies have demonstrated that with proper adherence to ART, viral suppression can be achieved, significantly reducing the risk of transmission. Additionally, the use of PrEP by HIV-negative partners has proven effective in preventing transmission during conception attempts (Ngure et al., 2017). The availability of assisted reproductive technologies, such as in vitro fertilization and sperm washing, further enhances the success of safe conception for couples affected by HIV.

Despite the progress made in implementing Safer Conception Services, several challenges and barriers persist. Limited access to healthcare services, including ART and family planning, remains a significant barrier in resource-limited settings. Stigma and discrimination associated with HIV/AIDS often deter individuals from seeking these services. The current state of safer conception services suggests the need for an integrated care model that addresses multiple barriers to care (Goggin et al., 2014). Healthcare providers play a crucial role in the delivery of safer conception services for HIV-affected couples. Supporting providers to assess clients' fertility intentions and offer appropriate advice, as well as public health campaigns that address sexual HIV transmission in the context of conception, may improve awareness of and access to safer conception strategies (L. Matthews et al., 2015). Furthermore, healthcare providers offering safer conception services should build trust with couples and recognize the need for continual couple counseling to encourage the adoption of safer conception services (Kaggiah et al., 2021). Before the widespread implementation of safer conception services, it is crucial to better understand providers' perspectives regarding the provision of care, as they will be pivotal to the successful delivery of safer conception (Crankshaw et al., 2014).

Inadequate training and knowledge among healthcare providers regarding SCS can hinder effective implementation (Kawale et al., 2015). Their knowledge, attitudes, and perceptions significantly impact the availability, accessibility, and quality of these services. They are also essential for addressing implementation gaps, facilitators and barriers to delivering safer conception services (West et al., 2016). Studies have shown varying levels of knowledge among healthcare providers regarding SCS. While some providers possess a solid understanding of the interventions and strategies involved, others demonstrate limited knowledge and awareness. Factors such as professional training, experience, and exposure to updated guidelines and protocols influence the level of knowledge. Gaps in knowledge may hinder the appropriate counseling, referral, and provision of SCS to individuals and couples affected by HIV/AIDS (Joseph Davey et al., 2018; West et al., 2016). Healthcare providers need to educate men and women on issues surrounding conception, as well as the potential for incorporating prevention of mother-to-child transmission (PMTCT) and safer conception education into HIV clinical services (Mandell et al., 2021).

Attitudes of healthcare providers toward SCS can significantly impact the delivery and uptake of these services. Positive attitudes are associated with recognition of reproductive rights, a patient-centered approach, and an understanding of the importance of preventing HIV transmission during conception attempts. However, negative attitudes, including stigma and discrimination, can hinder the provision of SCS and lead to judgmental or unsupportive interactions with patients (L. Matthews et al., 2015; Treves-Kagan et al., 2017). Concerns about resource constraints, feasibility, and ethical considerations may also influence attitudes among healthcare providers.

Perceptions surrounding SCS among healthcare providers encompass various aspects, such as acceptability, effectiveness, and feasibility. Acceptability is influenced by factors like cultural beliefs, personal values, and professional norms. Concerns related to the feasibility of integrating SCS into existing healthcare systems, limited resources, and time constraints are common. Perceptions of effectiveness are shaped by the availability of scientific evidence, experiences with successful outcomes, and access to training and education.

The knowledge, attitudes, and perceptions of healthcare providers regarding Safer Conception Services significantly influence the availability and quality of these services for individuals and couples affected by HIV/AIDS. Improving perceptions is essential for enhancing the delivery of SCS.

Methodology

Study design/site

This was an explorative qualitative study conducted in six clinics at Region F, Inner City of Johannesburg. These clinics are part of the sites for the Wits Reproductive Health and HIV Institute's implementation project piloting SCS integration into public primary healthcare services. They are classified as high-volume clinics (Rosettenville and Esselen), medium-volume clinics (Bellavista and Jeppestown), and low-volume clinics (Crosby and Crown Gardens) based on patient volume by the South African National Department of Health (NdoH).

Population and sampling

Study participants were purposively sampled. They are healthcare facility managers from six clinics in Region F (Rosettenville, Crosby, Jeppestown, Esselen, Bellavista, and Crown Gardens) in the inner city of Johannesburg. They consisted of (three men and three women) age range 27–64 years with overall working experience between 4–38 years. The clinics chosen for the implementation of the safer conception services were initially nine and each facility manager was requested to represent each clinic. Therefore, out of nine healthcare facilities, only six healthcare managers were interviewed, and this was determined by the following: each healthcare facility is managed by one facility manager, therefore only six were interviewed and data saturation was reached. Creswell and Creswell (2018) maintained that qualitative research aims for depth instead of a sample that represents a larger population; a smaller sample is therefore advised to achieve this level of depth. This relates well to this study because the researcher wanted to explore the perceptions and experiences of facility managers in the implementation of Safer

Conception Services in Public Health Care facilities, and also to explore the in-depth understanding hence the chosen sampling method of purposive sampling to seek out healthcare managers in a setting where the phenomenon under study is implemented, which led to smaller sample of six out of nine healthcare managers.

Data collection

In-depth interviews (IDIs) were conducted with health facility managers between Nov 2017 and Sep 2018. Semi-structured guides were used during the interview to engage respondents' perspectives on SCS and evaluate their experiences, perceptions, and insights from the SCS roll-out at their facility. All participants speak English hence, interviews were conducted in English for 30–45 minutes, and audio recorded.

Data analysis

According to Belotto (2018), data analysis refers to the process of data management, description, evaluation, and interpretation. Thematic analysis is a method of data analysis in qualitative research that most researchers use, and it is flexible because it can be applied and utilized broadly across various epistemologies and research questions. Creswell and Creswell (2018) is of the opinion that data analysis is built on themes and that the researcher makes interpretations of the meaning of the data. Thematic analysis is a qualitative data analysis method that involves reading through a data set such as transcripts from in-depth interviews or focus groups and identifying patterns in meaning across the data to derive themes (Nowell, 2017). For this research, each In-depth Interview (IDI) was recorded and transcribed. All participants were asked to sign an informed consent form, including consent to audio recording. The researchers used a digital voice recorder to record the interviews and took field notes during the interviews. At the end of each day, the researchers listened to the recorded interviews. The interviews were transcribed verbatim into Word documents. The transcripts were read multiple times for understanding and compared with the recordings to ensure uniformity. To ensure quality, another person Researcher who was not involved in the interviews translated, cleaned, and coded the transcripts. Thus, a five-step process of familiarizing, coding, generating themes, reviewing themes, naming, and defining themes and interpreting data was employed. The process allowed the researcher to ensure the codes were reviewed and harmonized. Sub-themes were formed by grouping similar codes. This process involved two independent reviewers and any disagreement between the reviewers was resolved through discussion and consensus. Finally, related sub-themes were merged to form themes that describe the experience with SCS. The whole detailed of the thematic analysis was used to analyze the data.

Ethical considerations

Ethical approval was obtained from the Human Research Ethics Committee (Medical) at the University of Witwatersrand, Johannesburg, South Africa. The ethical clearance number is M170311.

Results

Demographic data of participants

In-depth interviews were conducted among six healthcare providers in Region F. The age of the participants ranges between 27–64 years, with half of the participants between 35–50 years old. There were three professional nurses and three primary healthcare nurses. Out of the total number of nurses ($N = 6$), three has less than 20 years professional working experience while the rest has over 20 years of professional work experience. See Table 1.

From Table 2 below the results revealed that five (5) themes emerged from the findings and were supported by various sub-themes. The themes include the following: Positive response to the implementation of SCS, capacity building, the impact of SCS in public healthcare facilities, SCS challenges and scaling up. The below shows a table of themes and sub-themes.

The results are discussed under each theme and are supported by sub themes and excerpts from different participants.

Theme 1: positive response to the implementation of SCS

The implementation project of SCS was positively and willingly supported by all interviewed facility managers of the city of Johannesburg. They all saw a great project, and an opportunity that can benefit patients and their families. This theme will be discussed under two sub themes, namely willingness to implement SCS and positive attitude in implementing the SCS.

Table 1. Sociodemographic characteristics of primary healthcare providers ($N = 6$).

VARIABLES	DESCRIPTION	FREQUENCY
Age	<35	1
	35–50	3
	Above 50	2
Gender	Female	3
	Male	3
Profession	Professional Nurse (PN)	3
	Primary Health Care Nurse (PHCN)	3
Overall years of experience	<20 years	3
	>20 years	3

Table 2. Emerged themes and sub themes.

Themes	Sub themes
Positive response to the implementation of SCS	● Willingness to implement SCS. ● Positive attitude in implementing the SCS.
Capacity building	● Successful training on SCS. ● Successful supervision/coaching and mentorship of staff. ● The need for training of other staff members.
Impact of SCS in public healthcare facilities	● The need to include other topics in SCS training. ● Successful education of patients on SCS. ● Successful decision-making by discordant couples resulting in pregnancies using SCS.
Scaling up SCS	● Importance of educating couples about SCS. ● The need and demand for SCS. ● Integration of SCS.

Willingness to implement SCS

Although the staff has never implemented the SCS before and had limited knowledge regarding the SCS, after being informed about the new services, their response was positive, and they showed some willingness to try their best to implement the services to benefit their patients. This is supported by the following quote from the healthcare provider:

I had an open mind to it (safer conception) and wanted to see how this project will unfold. But at the time I had a clear vision and wanted to see how this would work because I see this is relevant to people's lives. (64 years Female, PN)

Healthcare providers saw value in the project and thought it was a good thing to benefit patients. They were able and willing to attend the staff training to be informed about the SCS and how it will be implemented. This was a positive platform for staff to engage the trainers, ask questions for clarity so that they can implement the program smoothly, see the below quote to support the finding:

Safer conception is a good thing; it was introduced through in-service training, and we were told how it will unfold and was hoping it will work effectively. (35 Male, PHC)

I thought it was a good project and it was introduced to us at the meeting. As a manager, I saw it as a good thing that will help patients and besides, I also have some of my relatives who are infected and affected by HIV and this will help them if they need to plan for pregnancy. I saw it as a good concept to empower us about the new services. (54 Female, PHC)

Positive attitude in implementing the SCS

Participants showed some positive attitude in the process of implementing SCS regardless of challenges faced. This provided them with a good opportunity to share the information regarding the available services. Furthermore, this opportunity ensured participants were able to intervene to provide services to a diverse population of patients who accessed healthcare services. This is supported by the below except:

I saw myself in a way to help and encourage clients of all types, to tell them that there is a new service, and this thing (safer conception) is for all. I will tell them that they are all welcome to access the services freely and feel free to ask about the services. (35 Male, PHC)

Theme 2: capacity building

In implementing the SCS to benefit the discordant couples, it is important to equip healthcare providers with the necessary tools for the success of the project. Such tools included trainings to strengthen the knowledge and skills of healthcare providers. Furthermore, this also included assisting staff to adapt to the new project by ensuring they offer psychosocial support and assisting them in changing their mindsets, attitudes, and perceptions.

Successful training of SCS

The training we received was good, I mean the package we received, the charts, and I was able to use them with my work. It (safer conception) will fit well, and all staff must be trained. If all the staff are trained, we will be able to see more patients than expected. So, my advice for you is to train every staff and at all levels (Smiling . . .). (49 Years Male, PN)

Yet with some facilities, only limited numbers of staff were trained, and this left the gap in the implementation of the SCS. This is supported by the below quote:

You know at times since there were few people trained on the services and if the person trained on safer conception is not around it would be difficult for those around to fill in the forms and deal with those questions (safer conception), since not everyone was trained on safer conception. (36 Male, PHCN)

The need for training and involving of other healthcare staff members

It was evident that the SC project needed the teamwork of all healthcare providers including the staff in lower cadre. When the team is empowered, they can meet the needs of patients across all levels and even refer patients where possible for further intervention and management. See below the importance of involving various staff members:

What I did was to involve other categories in the project to ensure it becomes successful. I saw myself as a leader so that people who present with issues can be helped. I saw that it's important to involve other categories because it is not only nurses who come across (deals with) patients, other staff also do. So, I involved other categories like HCT counsellors as they are the point of entry, the clerks, and the health promoters so that they can educate the communities about the new services. I did involve the nurses who did not go for training on safer conception, may also try to involve other nurses in future. (64 Female, PN)

Maybe include health promoters in the facilities; they can always take this information to the patients and to the communities. Health promoters provide health education in the facilities around diabetes, hypertension, HIV/AIDS and so, safer conception can be part of the package as well, and they can talk about it. Please include them. That's all I can say. (35 Male, PHCN)

It is evident that the SCS does not call for the intervention of only healthcare professionals, even other lower categories of staff were seen to be key in making a difference. Therefore, for the SCS to be successful, they should consider the role of other lower staff as it is imperative and significant, in the overall implementation of SCS. This was also recommended by the following participants below:

Lower staff is important, and they must be involved a lot, especially counsellors at large. Please involve everyone and it will flow smoothly. We did have counsellors and linkage officers and they did well in the project despite the challenges experienced. (54 Female, PHCN)

It is also noted that when patients come to consult at healthcare facilities, they don't go directly to the consultation rooms of healthcare providers since there are protocols and guidelines to be observed. On arrival, they are welcomed and engaged by other facility staff members such as counselors, cleaners, clerks, etc. This is supported by the below quote:

The thing is, you find that our clients interact with the counsellors and the cleaners before they get to see the professional nurses. So, if people at the lower category are trained about safer conception . . . this . . . it's . . . it's like you are creating a positive view on the provided service, so it is important to align everyone. For example, if the cleaners know about safer conception and patients walk in, the cleaner will be able to tell the patient that we have this sort of service at this facility, speak to the counsellors and the counsellor will educate and clear up any misconceptions. So, by the time the patient gets to see the professional nurse at least they have an idea of safer conception. (64 Female, PHCN)

The need to include other topics in SCS training

Although SCS was successful in most facilities, there were concerns to add other topics that can benefit staff. This includes the importance of Prevention of Mother to Child Transmissions (PMTCT) and mental health. This information will assist patients when they are provided with some information, education including offering psychosocial support. This is supported by the below excerpt:

I suggest that in your training, they must add little part on PMTCT as well as mental health. You know what, we need to treat patients in totality and find out what is wrong with them as a lot of them have stressors and depression. We need to assess that, you can be surprised that some of these patients are so stressed and being forced by their partners and in-laws to conceive and yet they have no choice, so we need to reach out and provide some kind of support to such. That's all I can say. 36 Years Male, PHCN.

Coaching/supervision and mentoring post-SCS training

Following the successful initiative of training and development on SCS, post-training support was provided to ensure healthcare providers who were able to implement the new knowledge gathered successfully, and ongoing supervision/coaching and mentorship were provided to identify the gaps and to strengthen the services provided to the patients. This was supported by the following HCP:

In this facility, as I said, the training was received well by professional nurses who were active in seeing safer conception patients. Also, with the help of the counsellors who did most of the initial job, it was very easy for the nurse to attend to the clients. They (staff) received good mentoring supervision, and no complaints were reported: (64 Female, PN)

Post-training support was ensured provided every week or bi-weekly. This was to ensure that healthcare providers become competent in identifying their gaps and working on them for improvement. Also, this was to ensure they enhance and strengthen their knowledge and skills so that they could be confident and independent in implementing the services by themselves. See the below quote in support of this finding:

The coaching was quite good; the mentoring was quite good. I mean it was happening on a weekly basis or at least every two weeks. I would recommend training support of supervision and mentoring happen yes, every week or every two weeks to ensure they tackle the challenges they may encounter. The mentoring was good. As I said, support is key in this whole project to facilitate and to ensure the project goes well. (35 Male, PHCN)

I think like with any other project; you need a specific team to ensure the project runs smoothly. So as our partner, the support is quite key, you need to support the people you trained to ensure they are in line with the needs of the project. I mean supporting people you trained is important to ensure they implement what they had learnt and to ensure the programme runs smoothly umm Umm Like I said, continued support is important, that is key. Because sometimes you train this people and after a week or so if there is not support, they will stop. So, coaching and mentoring is important. Also, train more than one or two, even three will make sure the services run smoothly. (27 Male, PN)

Theme 3: impact of SCS in public healthcare facilities

There is value in implementing the SCS and it had benefited patients in various ways. Healthcare facility managers ensured when the program was implemented that patients were engaged, educated, and empowered about the new services so that they could make informed decisions. This theme will be discussed under the following sub-themes, namely:

successful education of patients on SCS, successful decision-making by discordant couples resulting in pregnancies using SCS, and the importance of educating couples about SCS.

Successful education of patients on SCS

Those clients who fall pregnant by themselves regardless of their viral load I still say they still need more education, and education needs to be emphasized to the patients. (35 Male, PHCN)

The education and information shared with patients made a positive impact, it was further spread to other patients who came to access and verify the service so that they can access them. This is what the facility manager said about one of the patient's below:

Patients responded both positively and negatively to the availability of the service. Those who responded positively came back. After receiving the information, they will come back and tell us that I heard about the safer conception services and would come to access the services to see (safer conception sister) but due to staff shortages, this has impacted on us negatively. (36 Male, PHCN)

Successful decision making by discordant couples resulting in pregnancies using SCS

The healthcare providers were able to provide psychosocial support and education to patients about the SCS, so that they can make informed and sound decision in accessing SCS. These resulted in couples having successful and safe pregnancies and as such were referred for further intervention and management to other departments like PMTCT. This is supported by the below except:

Well in this clinic, we were able to achieve clients' pregnancies, like successful pregnancies. Ahh . . . and, through the safer conception we were able to identify early bookings (pregnancies) on time. Ahh . . . and those who were HIV positive who did not know their HIV status and we put them on treatment. So, these are very important. (64 Female, PN)

The SCS did not only provide conception services but also it helped in strengthening couples' relationships to overcome the pressure of pregnancies stemming from various angles. See the below quote in support of the statement:

It (safer conception project) gave us information and now we know how to treat patients in totality and, there is good relationship between patients and their spouses. In the area where I'm working, we have mostly Zulus, and I had this patient whose partner wanted a child badly and one of the in-laws came to the facility to ask if it's possible for a couple with one partner HIV positive and the other HIV negative to have an HIV negative child. In that space, I managed to educate him about safer conception services. They came for more information and as I speak now, they have an HIV negative baby, so, Yee . . . (Smiling) safer conception is working. I was able to talk to them about safer conception and the HIV negative partner is still HIV negative (smiling). (54 Female, PHCN)

But what I see is, in this clinic, safer conception had a good reception and acceptance by clients hence the number of patients enrolled are high. This (project) was also welcomed by the staff as there were 2 trained counsellors and I professional nurse and they were very happy to do it. Even now, we are still following up our patients and I understand 2 of our patients got pregnant. (64 Female, PHCN)

Importance of educating couples about SCS

To implement any project, it is necessary to empower people with education. In this instance, the facilities made efforts to make time and engage patients by educating them about the new SCS, the availability of services, and how to access them. Also, they were informed about the relevant staff to be contacted in case they needed services, see the below quotes (excerpts):

This clinic is very busy, very busy and we hardly take time to educate patients about health, but with safer conception, we managed to engage patients about the project and attend to their health needs. So, I think patient saw that we value them, and we value their health. (49 Female, PN)

The program did not only provide great and positive education but also brought hope to couples and patients. They now know that they can live better and longer since they will be able to make their wishes of having babies come true by accessing the free service. This is supported by the below excerpt:

Patients have learned so much from the program and they even share what they have learned with the staff. They don't see HIV as a death sentence, and they are now free to talk about their status. They talk to us about safer conception and ask for advice when they want to conceive. So, they received the services well and they liked it. (54 Female, PHCN)

Furthermore, SCS has brought immense hope and faith in people infected and affected by HIV. SCS changed the narrative and perceptions of those who did not believe in themselves and brought them to a whole new life and new level. Knowing that they could benefit from the services, they were confident in themselves, were able to embrace life positively, and looked forward to more. This is supported by the statement below:

Initially patients thought they would not be able to participate in such an activity, especially like those who were HIV positive they thought they would never ever have babies. So, because of these services that have been introduced, we managed to counsel them and educate them to start a family safely. Again, now that patients know that they can have babies, their perception that people with HIV can't have children was proven incorrect (Smiling. . .), yes, it was proven incorrect. (27 Male, PN)

Theme 4: the need and demand for SCS

Since services are easily accessible and meet the needs of patients, it is evident that there is need and demand for such services as they may be beneficial.

The need and demand for SCS

Healthcare providers have recommended that the SC services are needed and are in demand since individuals in discordant relationships and discordant couples have a desire to have babies and yet some didn't know they can benefit from such services. This is supported by the following quote:

Then please look at the other issues like staffing, I think it would be good if it can be scaled up to other facilities. (64 Female, PN)

Safer conception is a service, it's a necessity, it's a need, and it's a requirement for clients. It helps with other factors related to it like unplanned pregnancy and as well as with PMTCT. (27 Male, PN)

Integration of SCS

There is need and demand for SCS and it should be integrated in the public healthcare facilities since it has been proven that the services can be implemented and there are patients who will benefit from it. Despite the challenges facing healthcare facilities, participants saw the need that the services can be successfully implemented. See the below quote in support of the SCS integration:

Maybe if that (SCS) can be integrated that will be better, for example, if I see the safer conception patient and want the patient to take blood, I need to refer the safer conception to the blood room like any other patient, and when the patient came back, I can do what I want to do, refer to vitals ... etc. ... just like that. You know what I mean because now if I had to see a safer conception patient alone, I feel like I run another clinic while I still need to see other patients waiting to be seen. (36 Years, Male Nurse)

Taking into consideration that SCS offers a package of service, this was also noticed that it can indeed include other additional services such as male medical circumstances, Pap smear amongst others and as such, no patients should be seen in different consultation rooms by different healthcare staff members for different service, all services are recommended to be offered as a package and received from the same healthcare provider as one-stop shop. See the below except in support:

Please integrate safer conception in the clinic, the minute you start talking about safer conception it must focus on other parts of health issues and not only on safer conception only, but it must also include others such as ... like ... e ... MMC, Pap-smear. Ehh ... it must be ... it must be a one-stop shop as it will open the gate way of other healthcare needs that needs attention. (49 Years, Female Nurse)

Integrate safer conception in the stationery and so that nurses know that this is their day-to-day duties or provide a register or booklet they can use as part of their duties where they can submit the numbers. This should be part of their scope, as a service and not as research. We need to start to put it as part of the service for all patients and not just for patients who are HIV positive. (35 Years, Female Nurse)

Discussion

This qualitative research sought to explore the perceptions and experiences of facility managers regarding the implementation of safe conception services in public healthcare facilities. The results revealed four (4) themes from the findings namely: a positive response to the implementation of SCS, capacity building, the impact of SCS in public healthcare facilities, and scaling up SCS. This means that the HCPs were willing to respond positively to the implementation of SCS in public healthcare facilities. They received training that improved their knowledge and skills and experienced challenges in implementing the services. There was a positive impact, and there was a demand to scale SCS since the service

is greatly beneficial to discordant couples. Therefore, SCS needs to be integrated into public healthcare facilities, and a multi-pronged approach is needed to provide comprehensive SCS.

Regarding the positive response to the implementation of SCS, when the project was introduced, participants supported the program because they wanted to make a difference in the lives of discordant couples. They showed some willingness and acceptance in the implementation of the SCS as a new project in their facilities. The program was introduced through training. The HCPs were willing to attend the training and received post-training mentorship to ensure the successful implementation of the SCS. Showing some positive regard, and support, and making a difference in the lives of patients is necessary; this was also observed in a study conducted by Schwartz et al. (2019), who found that healthcare providers were able to accept training on new projects since they saw value to benefit patients at their facilities. Furthermore, healthcare providers in their implementation of SCS, were seen to be comfortable, especially in the presence of discordant couples, couples were comfortable spending time well at the facility without rushing, and they were provided with privacy and confidentiality.

In exploring the capacity building provided to participants, for SCS to be implemented successfully, it is integral to introduce, enhance, and strengthen the capacity development of employees through training. This training should include all relevant and necessary staff to ensure that the needs of discordant couples are met. Schwartz et al. (2015) recommended that HCPs receive comprehensive detailed training to provide client counseling and support to implement safer conception services to benefit healthcare facilities, as this will improve their knowledge and skills. Lack of training, mentoring, and clinical tools creates HCP uncertainty concerning safer conception services, which are more likely to leave them unwilling and hesitant to ask patients about their need for reproductive goals (Moodley et al., 2014; O'Neil et al., 2016; West et al., 2016). Following SCS training, the participants reported an improvement in their knowledge and skills related to SCS. This knowledge assisted them in implementing the program successfully, and positive outcomes were observed at the end of the program. Therefore, the training improved participants' confidence in engaging with patients. Knowledge assists HCPs in sharpening their existing knowledge and blending it with new skills to be competent in their work. This finding was also observed in the study conducted by Schwartz et al. (2019), where the knowledge and self-efficacy of healthcare providers who were trained in SCS improved as they were able to share relevant SC strategies. Although some received training that had a positive impact on them, some studies also recommend strengthening training to benefit other healthcare providers. Studies by Gutin et al. (2020) asserted that there is a need for safer conception training because, in some countries like Botswana, there are no formal safer conception guidelines or protocols to support healthcare providers, and most felt unprepared to discuss safer conception techniques because of limited and insufficient knowledge of safer conception guidelines or protocols. All providers expressed a desire for formal training about safer conception methods, approaches, and the correct package of services that need to be provided to patients in need of SCS. Patwa et al. (2019) maintain that training is necessary for most staff members implementing SCS and should not be limited to a few staff members but should cover others and the training itself should be comprehensive to cover guidelines and safer conception methods and focus on training of health care workers on how to communicate sensitively with patients about issues related to safer conception. Since SCS

training is important for HCP, studies by Saleem et al. (2016) assert that HCP providers reported a lack of training in how to deal with childbearing and a safer conception for people living with HIV. Our results agree with those of various studies on the importance and impact of SCS training.

Regarding the impact of SCS in public healthcare facilities, although most patients did not know much about SCS, healthcare workers had to engage them in providing ongoing education and sharing of information to empower them. This was necessary since couples needed to make informed decisions regarding accessing SCS, and such education was well received and positively accepted. When introducing new services, it is imperative to share information and educate patients in healthcare facilities. This is also supported by Kaggiah et al. (2021) in their study, as they had to strengthen the limited knowledge couples had regarding safer conception education, including counseling services at their clinic. Healthcare providers and facility managers supported discordant couples seeking healthcare services. Therefore, healthcare providers were able to manage their educationist role effectively and efficiently since they had received comprehensive training on SCS; hence, information was easily shared with the couples. Since there was successful decision-making resulting in pregnancies using SCS, this shows that patients and couples were empowered and learned more about SCS and its benefits; they were able to engage each other so that they could make sound informed decisions. This was also reported in a study conducted by Mindry et al. (2018), in which healthcare providers provided education and psychosocial support to couples, which helped them make informed choices regarding childbearing. Furthermore, this was also observed in studies held in Uganda, where the importance of childbearing was seen to be important for discussions, therefore couples were empowered to consider the importance of childbearing, spacing in between, and ensuring the prevention of transmission from one partner to another. This conversation are not only seen happening between patients and healthcare providers, but those affected by HIV in the relationships are also interested to have open discussions about this. However, previous studies have shown that those infected and affected by HIV are tempted and eager to have these conversations with healthcare providers, but unfortunately, they are not yet willing to initiate such conversations due to fear and lack of information (Finocchiaro-Kessler et al., 2014).

There is a need to scale up SCS in primary health facilities since there are demands for services to benefit patients, and healthcare providers are willing to assist in identifying such patients. This is also supported by L. T. Matthews et al. (2018), who argued that there is a need and demand to establish and develop SCS tools that support discordant couples, identify potential risks in HIV-negative couples, link them with safer conception services, and use methods that align with their preferences and level of risk. Matthews et al. (2018) maintains that, in doing so, the overall goal of integrating SCS is to engage all populations who could benefit from services including mutually disclosed HIV-serodiscordant heterosexual couples, men and women living with or exposed to HIV, same-sex couples, and seroconcordant-positive couples. Safer conception care must therefore be flexible to address the diversity of clients who need such services, and this will reduce the stigma as we continue to normalize pregnancy desires and pregnancies among people infected and affected by HIV. Furthermore, scaling SCS will enhance and strengthen the integration of SCS in public primary healthcare facilities, because couples should feel free and be able to have safer conception conversations. Healthcare providers should also engage couples in such conversations to assess and determine the likelihood of couples starting to work on safer conception plans. According to Gutin

et al. (2020), discussions on safer conception are necessary. In their study, discussions on safer conception were reported to be rare for both couples and healthcare providers. Furthermore, over half the women reported that no provider initiated a safer conception discussion. SCS and such related conversations can not only benefit discordant couples to enjoy their sexual rights and have safe pregnancies to deliver HIV-free babies, but safer conception services can also simultaneously support universal test-and-treat (UTT) (World Health Organization, 2015). This is also associated with the UNAIDS 90:90:90 targets, the elimination of mother-to-child transmission (eMTCCTE), and broader HIV prevention goals of the Start Free, Stay Free, and AIDS-Free Initiative (World Health Organization, 2015). According to the World Health Organization (2015), South Africa has managed to commit to attaining 90% HCT uptake, 90% ART initiation, and 90% viral load suppression, as per UNAIDS 90:90:90 targets. To achieve these goals, South Africa introduced UTT in September 2016 (Health-e News, 2016). Based on the above, it is therefore imperative and necessary for the SCS to be integrated into public healthcare facilities, as this also improves the update of HIV testing, improves adherence and viral suppression, and improves patient retention in healthcare facilities for both males and females.

Studies conducted by Patwa et al. (2019) suggested that the successful integration of a safer conception into routine primary care would require community sensitization campaigns to educate the community and generate further demand for the services. In addition, safer conception training to improve provider understanding of safer conception care would need to balance the benefits of a “couples-based” intervention with the need for safer conception services for unaccompanied individuals and those who have not yet disclosed their HIV status. To successfully implement SCS in South Africa, it is imperative to consider the status of public healthcare facilities. This study explored the perceptions and experiences of facility managers in the implementation of safe conception services in public healthcare facilities.

Conclusions and recommendations

There is a need for SCS in public primary health care facilities. HIV-serodiscordant couples must be empowered and feel free to access SCS at public healthcare facilities. SCS should be prioritized and assessed regardless of couples' fertility desires so that they can benefit from these services. There is a need to train all staff members, including junior staff members, which should be strengthened and supported by coaching and mentoring post-training. Since public healthcare facilities can be accessed by both individuals and couples, they need to be flexible to welcome both walk-in patients and book patients where possible. Furthermore, since new patients consult public healthcare facilities daily, there should be ongoing education and sharing of information on SCS to benefit all patients accessing healthcare services. Regarding staffing, the recruitment of additional healthcare staff members should be prioritized to ensure that quality services are provided to patients seeking SCS. This will also assist in ensuring that SCS is not disrupted and that lengthy consultations with patients are reduced and avoided to maximize the quality of services.

Some individuals and couples do not know the HIV status of their partners. SCS can assist in testing, treatment management, and viral suppression. This process also assists couples in the disclosure process so that they can support each other in the process. Furthermore, assessing SCS will benefit discordant couples to exercise their sexual rights and enjoy their desire to have HIV-free babies.

Limitations

The study was implemented in one region, excluding other regions. The study was conducted in public healthcare facilities, excluding other facilities in the same region. The study participants who were interviewed were only healthcare facility managers who were responsible for ensuring SCS and dealt with challenges foreseen during the time of supervision. The training was limited to a few staff members, excluding others because of their specialty and availability.

Acknowledgments

The authors thank the USAID/PEPFAR for funding the project, the SCS team, the healthcare managers of Region F, and the Department of Health for providing permission to conduct the study.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The project was funded by USAID, and the authors declare no competing interests.

ORCID

Constance Matshidiso Lelaka  <http://orcid.org/0000-0003-3021-562X>
Olaide Olawumi Ojoniya  <http://orcid.org/0000-0001-6437-8385>

Author contributions

CML: Conceptualization and drafting of the manuscript, data collection, data analysis, and interpretation; OO introduction and methodology writing; restructuring of the content; editing of the manuscript; critical review; and revision for intellectual content.

Data availability statement

Raw data are available on request from the researchers.

Informed consent statement

All participants provided voluntary written informed consent before data collection. The anonymity and confidentiality of the participants were observed throughout the research process.

Institutional review board statement

Ethical approval was obtained from the University of Witwatersrand, Constituted by the University Human Research Ethics Committee (Medical). The clearance certificate number is M170311.

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