



Psychosocial support for counselors working with HIV-Serodiscordant couples

Constance Matshidiso Lelaka & Azwihangwisi Helen Mavhandu-Mudzusi

To cite this article: Constance Matshidiso Lelaka & Azwihangwisi Helen Mavhandu-Mudzusi (2025) Psychosocial support for counselors working with HIV-Serodiscordant couples, *Journal of Human Behavior in the Social Environment*, 35:6, 1000-1018, DOI: [10.1080/10911359.2024.2372466](https://doi.org/10.1080/10911359.2024.2372466)

To link to this article: <https://doi.org/10.1080/10911359.2024.2372466>



© 2024 The Author(s). Published with license by Taylor & Francis Group, LLC.



Published online: 29 Aug 2024.



Submit your article to this journal [↗](#)



Article views: 630



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)

Psychosocial support for counselors working with HIV-Serodiscordant couples

Constance Matshidiso Lelaka^a and Azwihangwisi Helen Mavhandu-Mudzusi^b

^aThe Discipline of Social Work, School of Human & Community Development, University of the Witwatersrand, Johannesburg, South Africa; ^bDepartment of Health Studies College of Human Sciences, University of South Africa, Pretoria, Gauteng Province, South Africa

ABSTRACT

Living in HIV serodiscordant relationship poses psychosocial challenges to couples. These necessitate proper counseling. This paper explored the psychosocial support for counselors working with HIV-serodiscordant couples at a regional hospital. The study used descriptive and exploratory approaches, underpinned by an interpretative phenomenological analysis design (IPA). Participants were selected using a non-probability snowball sampling technique. A total of nine participants took part in the study. Data were collected using an in-depth interview guide and analyzed using an interpretive phenomenological analysis framework. Three themes emanated: knowledge deficiency on serodiscordancy among the counselors, limited/lack of support and ways to recommend HIV-serodiscordant couples services. The findings indicates that there is need to enhance, strengthen, and provide comprehensive psychosocial support services to discordant couples. To support and improve the knowledge, confidence and skills of counselors, the following should be implemented: provision of training, introducing debriefing sessions to reflect on discordant cases, follow-up on discordant couple's post diagnosis to offer psychosocial support services, and establishment and strengthening of the support groups.

KEYWORDS

Counsellor; couple; HIV-serodiscordant couples; serodiscordancy; psychosocial support

Introduction

Mixed-status couple refers to a couple having different HIV statuses; one partner's HIV status is negative while the other one is HIV negative. According to Chihana, Conan, Ellman, Poulet, Garone, Ortuno and Maman (2021), there is 30% of new HIV infection by the discordant couples across sub-Saharan Africa. There is a total of two-thirds of new infections globally (Guthrie et al., 2007). Lingappa et al. (2008), maintain that couples in stable relationship in South Africa account for 25% of stable, and such couples continue to contribute close to 30% of total HIV-incidence cases, and such transmissions are putting the risks to the HIV negative partners (Chemaitelly et al., 2014). According to the World Health Organization (WHO) guidelines (WHO 2012), HIV serodiscordant are the high-risk population group and HIV treatment has proven to reduce and prevent further HIV infection (Cohen et al., 2016). Given the risk of transmission of HIV among serodiscordant

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

© 2024 The Author(s). Published with license by Taylor & Francis Group, LLC.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

couples and the demonstrated effectiveness of anti-retroviral treatment (ART), this is a priority group for HIV prevention. Counselors are important healthcare providers, and they need to ensure discordant couples have the right and need to access the HIV services since they are the first point of contact in most healthcare counseling services. The study aims to explore the psychosocial support for counselors working with HIV-serodiscordant couples at a regional hospital in Gauteng, South Africa.

The work of HIV counselors has a significant positive impact on the overall well-being of individuals living with HIV and discordant couples. HIV counselors help discordant couples cope with the emotional and psychological stress associated with their diagnosis. This support is vital in reducing feelings of anxiety, depression, and isolation. HIV counselors provide crucial support in various dimensions, including emotional, psychological, and social aspects, which in turn improve the overall quality of life for people living with HIV (PLWH) and discordant couples. Thus, in addition to the above, the counselors provide various support such as psychological support, adherence to treatment, social support and stigma reduction, and empowerment and self-efficacy. Furthermore, a study by Van der Straten et al. (2000) highlighted that couples counseling reduced HIV-related stigma and increased mutual support within the relationship. Supervision is imperative and necessary to support counselors. Good supervision not only promotes effective and counseling outcomes but also prevents burnout and ensures sustainability of services provided to discordant couples (WHO 2010). According to Orlando et al. (2017), West et al. (2016), and Shelton (2001), counselors and other healthcare providers are first contacts in HIV facilities—are able to assist in providing the best opinions, share knowledge and skills in providing the best possible solutions to influence clients attitudes, perceptions and behaviors which in turn impact client behavior. This may result in a lack of reducing HIV infection among the serodiscordant couples. Counseling services are imperative for discordant couples and provide a safe space for them to express their fears and concerns, receive empathy, and develop coping strategies. Studies show that psychological interventions, including counseling, significantly reduce symptoms of depression and anxiety among PLWH. For instance, a meta-analysis by Sherr et al. (2011) found that counseling interventions were associated with improved mental health outcomes for PLWH and discordant couples, including reduced depressive symptoms and enhanced psychological well-being. The interventions provided for discordant couples through counseling can significantly enhance relationship dynamics, promote safer sexual practices, and support the mental and emotional well-being of both partners. A study by Allen et al. (2003) demonstrated that couples who received counseling reported higher levels of relationship satisfaction and better communication compared to those who did not receive counseling. Furthermore, studies indicate that counseling significantly increases the adoption of safer sexual practices. For example, a randomized controlled trial by Bunnell et al. (2006) found that counseling interventions led to increased condom use and reduced risky sexual behaviors among HIV discordant couples.

Counselors working with HIV discordant couples and PLWH encounter numerous barriers that can impede their ability to provide effective support and interventions. These challenges stem from various sources, including cultural, structural, interpersonal, and individual factors. Regarding social and cultural barriers, according to Mahajan (2008), social stigma in many African communities associated with HIV can lead to discrimination, both from within the community and from healthcare

providers themselves, making clients hesitant to seek counseling. This also includes the cultural norms and beliefs such that discussing sexual health and HIV openly is taboo in many families, which can prevent clients from seeking or fully engaging in counseling (Campbell et al., 2011). Counselors also face resource constraints, one of the major challenges in providing services in counseling which include limited knowledge and training as this can prevent counselors from providing comprehensive, educational, and continuous support to those infected and affected by HIV (Schneider & Lehmann, 2010). According to Collins et al. (2006) regarding healthcare infrastructure, there are challenges relating to inadequate healthcare infrastructure, especially in low-resource settings, can lead to inconsistent availability of ART and other medical services. Working in the HIV field sometimes comes with psychological and emotional barriers such as internalized stigma or self-stigma. Brown et al. (2003) asserts that internalized stigma or self-stigma can lead to feelings of shame and guilt, making it difficult for individuals to engage in counseling and this can result in affecting the mental health of counselors.

In working with discordant couples and facing, counselors have a need to employ variety of strategies to overcome counseling challenges. These include enhancing their skills and knowledge, fostering a supportive counseling environment, addressing stigma, and integrating comprehensive care approaches. Regarding enhancing skills and knowledge, this includes continuous professional development such as ongoing training and education in the latest HIV research, counseling techniques, and cultural competence that are essential for counselors to stay effective (Collins et al., 2006). Creating a supportive environment, creating a non-judgmental attitude and continuation of building trust and ensuring confidentiality is key in counseling as this also build confidence in both counselors and the clients they serve. Burton et al. (2010), maintain that Couple-Focused Counseling is imperative since this is counseling that involves both partners in discordant couples can help improve communication, address fears related to transmission, and enhance mutual support. Horvath et al. (2012) stipulates that with the changes that happens globally, it is necessary to focus on leveraging technology and innovation use of Digital Tools. This includes integrating digital tools such as mobile health (mHealth) interventions can help in monitoring adherence, providing reminders and offering support through telehealth services including the peer support programs that can provide additional emotional and practical support from individuals who have lived experiences with HIV, enhancing engagement and adherence. Furthermore, most counselors are not able to receive some psychosocial and work-related support, this is also reported by WHO (2012) that lack of support and irregular supervision is still a widespread problem in many countries for counselors.

If counselors are not supported to improve the services they provide to the discordant couples, this might impact on the services delivery of couples and may continue to contribute to the failure to achieve the desired targets of reaching zero infection on HIV in the year 2030. Therefore, there is a gap, and it is imperative to support counselors working with serodiscordant couples. The study aims to explore the psychosocial support for counselors working with HIV-serodiscordant couples at a regional hospital in Gauteng, South Africa.

Material and methods

Study design

A phenomenological exploratory descriptive qualitative design was followed. This design assisted the researcher to better understand the experiences of counselors, and therefore was able to explore and describe the psychosocial support for counselors working with HIV-serodiscordant couples. According to the researcher's assumptions, HIV negative partners in discordant relations are at risk of contracting HIV since they are not immune to HIV and therefore, they need to practice safe sex with their partners e.g., can use condoms, can take pre-exposure prophylaxis (PrEP). The HIV-negative partners often hold various assumptions that can impact their relationship dynamics, health behaviors, and psychological well-being. These assumptions can be based on misinformation, stigma, fear, and societal influences.

Study setting

The study took at a regional hospital in Gauteng province, South Africa. The hospital treats both patients and out-patients presenting with non-communicable diseases. The study is also the antiretroviral initiation site for individual and couple patients diagnosed with HIV. All patients who are diagnosed with HIV receive pre-test and posttest counseling from counselors. All patients are provided professional counseling services privately in the counseling room to observe the confidentiality of patients.

Population and sample

The study population consisted of nine counselors working with serodiscordant couples. Since Counselors have different qualifications, for the purpose of this research, they were sampled based on their job category or job title. Snowball, non-probability sampling procedures were adopted. All participants met both the inclusion and exclusion criteria of the study. All participants were accessed at their preferred times at the research site and the sample size was implemented until data saturation was reached.

Inclusion criteria

- 18 years and older
- Working at a Regional hospital, Gauteng Province
- Providing healthcare counseling services to HIV-serodiscordant couples for 6 months and more
- Willing to take part in the study willing to sign an informed consent and be audio recorded.

Exclusion criteria

- Less than 18 years of age
- Working at a community clinic and tertiary hospital
- Providing services to non-HIV-serodiscordant couples

- Not willing to sign an informed consent and refusing to be audio recorded for the data collection purposes.

Data collection

The interview guide was used to obtain data from participants. The data collection tool was divided into two sections, the first section was for the demographic data, and the second section and open-ended questions. To obtain reach data from participants, probes and prompts were used to encourage participants to share further their experiences. Data were obtained between October 2017 and April 2018, using a semi-structured interview guide face to face. All the interviews took place at the counselor's offices at the hospital and the interviews lasted for less than 45 min, and all the sessions were conducted in participants preferred languages. Consent received from all participants and all interviews were audio recorded and transcribed within 48 h into text, using Microsoft Word documents and data analyzed using interpretative phenomenological analysis (IPA). To ensure privacy and confidentiality of participants, participant's names were changed to protect their identity.

Ethical measures

Prior to data collection, approval was obtained from the University South Africa (UNISA), Department of Health's Ethics Committee. Helen Joseph hospital also provided permission for the study to be conducted. The UNISA ethics reference number is HSHDC 608/2017. All participants provided voluntary written informed consent prior to data collection. Confidentiality and anonymity of participants were respected throughout the research process. Therefore, this study complies with the Declaration of Helsinki ethical considerations because data was obtained from humans as participants of the study. Therefore, participants were respected and treated with dignity before, during and after the study. All participants were informed about the purpose of the study, they were informed that the study is voluntary, and they can withdraw anytime without feeling any guilty, they were also informed that prior to participation in the study, they would be required to provide written consent for both to be interviewed and recorded. This provided participants to practice their right to self-determination without coercion prior to taking part in the research. For the purpose of this research, the following ethical considerations were observed: the right to obtain full information prior to signing an informed consent form, protect human rights of participants, the right to privacy, confidentiality, and anonymity of participants, protecting participants from harm, obtaining ethical clearance and permission prior to implementing the study among others.

Data analysis

The researcher adopted a phenomenological framework analysis. This process provided the researcher with the support to assist to identify and analyze the psychosocial support for counselors working with HIV-serodiscordant couples since the framework is flexible to source data from participants. The researcher managed to transcribe data within 48 h after collecting data and was able to identify themes. Analysis was as follows, each transcript was

initially read twice to ensure understanding of the data and message. This was followed by making notes for each transcript to capture the meaning of participants, then themes, categories, and sub-categories for each participant were developed and compared at the end, the final list was then completed. Each transcript was double checked against the audio tapes to minimize errors as possible. The researcher following Poland (1995) guide of three categories of errors as quoted in Polit and Beck (2012). Furthermore, Polit and Beck (2012), continue to say that this will allow the researcher to develop, and code open-ended responses and categories, transform responses to fixed categories in a post hoc fashion so that tabulations can be made. For all the data collected, the researcher ensured that the stored data tapes were kept carefully, labeled them with an identification code number, date the data collected and the anonymous name or identification number of data collection.

The importance of confidentiality was observed as well as anonymity. To address the trustworthiness of the data collected, the researcher was able to contact participants to verify their descriptive experiences. Data collected was further used to check any misunderstanding, misinterpretation, or ambiguity.

Trustworthiness

Trustworthiness is defined as the degree of confidence in data, interpretation, and methods used to ensure the quality of a study (Polit & Beck, 2014). Maher et al. (2018) asserts that trustworthiness is a more suited criterion for assessing qualitative research. The researcher suggests that in ensuring the rigor or validity of the proposed research study, the focus should be based on trustworthiness. Polit and Beck (2014) stipulate that trustworthiness or rigor of a study refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of a study. For this research, the researcher applied the following four criteria: credibility, dependability, transferability, and conformability will be assessed. According to the researcher, credibility should be the primary concern while ensuring the rigor or validity of the planned research study. For credibility, the researcher will be adopting credibility using member checking to ensure she is on the right track. Maher et al. (2018) continue to elaborate that there are many strategies to address credibility that include “prolonged engagement” and member checks. Dependability ensures the process is described in sufficient detail to facilitate another researcher to repeat the work. Conformability is comparable to objectivity in quantitative studies. The researcher will use an audit trail to determine the dependability of the findings. To ensure transferability, the researcher will compare the findings with the literature through thick descriptions. According to Andrew, Richards, and Hemphill (2017), Transferability is addressed by providing a detailed account of the study context and through rich description in the presentation of results. The collected data will then be transferred to the researcher to be able to present the results of the context. To assess conformability, the researcher will use self-reflexivity to check for any personal beliefs and experiences relating to the topic that could be viewed as prejudicial. Thus, to ensure member checking during the data collection process, there was cooperation between the researcher and participants to ensure data accuracy. This provided the researcher an opportunity to engage with the research setting and participants by means of observations and engagement to build trust and gain an in-

depth understanding of the context of the study. Regarding trustworthiness, trustworthiness of qualitative data refers to the extent that the data can be considered truthful and accurate (Korstjens & Moser, 2018). The trustworthiness of qualitative data consists of four criteria such as credibility, transferability, dependability, and confirmability. To ensure trustworthiness and rigor, this was facilitated by means of double-checking emergent themes with the research supervisor to ensure themes did not distort the experiences of the participants and upon finalizing the table of themes, we agreed on the final table of the themes and sub themes. Furthermore, the researcher enhances and strengthened this by means of using the semi-structured interview guide as a source for qualitative research and this helped to develop a comprehensive understanding of phenomena of participants and their experiences.

Results

Nine participants aged 18 years and above met both the inclusion and exclusion criteria of the study and their ages ranged from 31 to 51 years. The majority were eight (8) females, with only one (1) male. All participants were employed as counselors at the regional hospital. Most counselors (5) had college certificates, and only four (4) had a Matric/Grade 12 certificate. Regarding their experience, the majority (4) had overall experience of 6 years (total years since started working), followed by three (3) with 4 years' experience, while two (2) had only 8 months' experience (total years of specializing in working with discordant only). All the study participants were South Africans. Biographic information—See [Table 1](#).

The findings suggested three themes and several sub themes on the psychosocial support for counselors working with HIV-serodiscordant couples, namely: knowledge deficiency, lack of support, and ways of improving services to HIV serodiscordant couples. Themes and Categories Results—See [Table 2](#).

Table 1. Biographical data per participant (Counselors).

Variable	Age	Sex	Professional Status	Overall Duration of work (total years since started working)	Educational Level	Experience working with HIV-serodiscordant couples (to years of specialising in working with discordant only)
Mpho	33	F	Counsellor	8 years	College Certificate	4 years
Penny	39	F	Counsellor	6 years	Matric	6 years
Bokang	51	F	Counsellor	7 years	Matric	4 years
Puseletso	40	F	Counsellor	6 years	College Certificate	6 years
Shosho	35	F	Counsellor	4 years	Matric	6 years
Rachel	40	F	Counsellor	6 years	College Certificate	7 years
Karabo	45	M	Counsellor	7 years	Matric	7 years
Kagiso	31	F	Counsellor	8 months	College Certificate	6 years
Nozi	40	F	Counsellor	6 years	Auxiliary Social Work College Certificate	4 years

Table 2. Summary of results.

Theme	Sub themes
Knowledge deficiency	Limited information regarding HIV serodiscordance among counsellors Lack of knowledgeable sources of HIV serodiscordance Lack of knowledge regarding HIV serodiscordance among community members Incorrect information regarding HIV serodiscordance among counsellors.
Lack of support	Inadequate training Lack of debriefing Limited support to HIV serodiscordant couples
Ways of improving services to HIV serodiscordant couples	Follow-up of HIV serodiscordant couples Support groups Sharing up-to-date information

Theme 1: knowledge deficiency

This theme gives a reflection of participants' experiences as *knowledge deficiency*. Counselors working with HIV-serodiscordant couples seem to be working with various kinds of population groups, which not all professionals are exposed to. These pose challenges to them, such as knowledge deficiency. This theme is composed of four categories, namely: limited information regarding HIV serodiscordance among counselors, lack of knowledgeable sources on HIV serodiscordance, lack of knowledge regarding HIV serodiscordance among community members and incorrect information regarding HIV serodiscordance among healthcare providers.

Limited information regarding HIV serodiscordance among counsellors

The participants expressed that they were faced with challenges relating to limited information. They felt that they needed more information to enable them to share such information and knowledge daily with HIV-serodiscordant couples.

There is information, but we do not have enough of it. We do not have enough information. So, patients would come and ask questions that we (counselor) cannot answer or even understand. It becomes challenging. Like some of the questions would be related to knowing why one partner is HIV positive, and the other is HIV negative while they were engaging in unprotected sexual activities since they got married. (Counsellor - Puseletso)

The problem of incorrect or limited information does not only lie with counselors but also with doctors who are supposed to be sources of information to nurses and counselors. The following quotations from the participants demonstrate the situation:

I asked doctors about Serodiscordant, and they do not give me a straight answer. I have already asked about five doctors about HIV-Serodiscordant and what I got was different answers from all of them. This makes me more confused. (Counsellor - Mpho)

The lack of knowledge regarding HIV serodiscordance among community members

It seems as if people in the community also lack information regarding serodiscordance. This makes it difficult for the counselors to explain to the serodiscordant couples, as couples often start blaming each other or even fighting and accusing the other partner of cheating.

I think there is a lack of information the way I see it; people do not have information regarding Serodiscordant. People do not have a lot of information regarding serodiscordant. By people, I mean the community members. When you give a serodiscordant couple with results, they become so furious and start saying that an HIV positive partner has cheated. Even when I try to explain, they do not understand. This frustrates me. You find the positive partner, especially if it is the female crying bitterly saying that they have never cheated or even had sex with any person except their partner, and us the staff because we have lack of information about that. (Counsellor - Penny)

Incorrect information regarding HIV serodiscordance among counsellors

Besides the limited information related to HIV serodiscordance, participants also indicated that they were not sure about information, or they received incorrect information. This is shown by the following statement:

I say, HIV wants an entry point to get into your system, so if your receptor cell is facing in a different position, it will never be able to get through. The receptor cells face in different ways, some are facing downwards, sideward, and upwards, so if they are facing downward; for example, HIV cannot get through. (Counsellor - Rachel)

Counselors recollect how experiences with incorrect information have left them doubtful about the service they are offering as well as failing to manage escalating issues as they arise during counseling sessions, as attested by counselor Bokang.

Being unsure about the correctness of the information I give to the participants stresses me out, as I sometimes think that I did not explain enough what HIV serodiscordant is. This means that they do not understand, and maybe I contribute towards that, as I have no additional information that I can give to them because I do not know more than this. I tell them that HIV serodiscordant is there out there, and I tell them about different receptor cells that some receptor cell is facing downwards, and they cannot catch HIV, and those receptors can catch HIV. (Counsellor - Bokang)

Theme 2: lack of support

Apart from information deficiency related to HIV serodiscordance, there is limited support for services provided to HIV serodiscordant couples. This lack of support is discussed under the following categories: inadequate training, lack of debriefing, and limited support to HIV serodiscordant couples.

Inadequate training

There were concerns regarding support to counselors, and some healthcare providers reported that since they have been employed, they were informed to provide couples

counseling to HIV serodiscordant couples, without having received any such training. When asked about any HIV serodiscordant couples training, this is what they had to say:

“We do not have training; I have not been trained on issues regarding HIV-serodiscordant couples. I am just using the knowledge I have received during HIV counseling and testing workshop, which I attended for three days when I started working as an HIV counselor. During that workshop, nothing was mentioned about couple counseling. Nothing was mentioned about HIV serodiscordant couples. The only information on serodiscordant is when we did HIV testing and were told of the HIV test results to be HIV positive, is negative, or the results be discordant.” (Counsellor - Bokang)

Lack of debriefing

Debriefing was identified as support needed by counselors. This was regarded as an opportunity that would enable them as healthcare providers to discuss, learn, and share challenges regarding HIV serodiscordance so that they can work better, support each other, and improve on working with such couples. The debriefing was also highlighted as one of the things that will provide motivation and encouragement to healthcare providers in working with HIV serodiscordant couples. This is illustrated in the following excerpts:

Since I have started working with HIV serodiscordant couples, I have never been debriefed or counseled. This is very painful because, each time after telling the couple about their serodiscordant status, it is so painful. Especially when the positive partner is the woman because the man becomes so furious and says all terrible things to the wife. You find the poor woman crying, and these scenes always haunt me. I think the institution should try and debrief us at least once every month, or whenever there is a need. (Counsellor - Mpho)

Lack of psychosocial support to HIV serodiscordant couples

Another challenge raised by the counselors providing care to HIV serodiscordant couples is limited support provided to such couples. The participants reported that, from their work experience, HIV serodiscordance had limited support from healthcare providers at large.

Let me tell you to be honest, from my own experience, and I do not think serodiscordant couples benefit enough from us, from clinics or elsewhere. Let me tell you, previously we used to have support groups for discordant couples and now all that has disappeared to thin air as there are no follow-ups for couples to come back. Some couples do not even know what they are facing because the negative partners do not have enough information to protect themselves. (Counsellor - Kagiso)

Other counselors, however, stressed that counseling is the only visible form of support given specifically to HIV serodiscordant couples, since the concept still has not generated much attention in the health services sector.

I do not think that there is much support offered to serodiscordant couples. The only support that one can see is the counseling support that is the only thing, but when coming to other forms of the support, I do not remember anything that got something to do with those couples. They do not get any of that support. (Counsellor - Penny)

Theme 3: ways of improving services to HIV serodiscordant couples

This theme focuses on ways of improving services for HIV serodiscordant couples by counselors based on their experiences. The importance of follow-up sessions for HIV serodiscordant couples, initiation of focus groups for couples, and sharing up-to-date information were recommended to be better options to improve support for HIV serodiscordant couples.

Follow-up sessions for HIV serodiscordant couples

It is believed that follow-up sessions will improve the quality of life as well as finding better ways to address barriers faced by HIV serodiscordant couples. This will enable counselors and healthcare providers at large to identify any challenges that might impact on the lives of couples and their relationships. This will contribute to early intervention and referral for further interventions and management. When study participants were asked about how support for HIV serodiscordant couples could be improved, they reported that the importance of follow-up sessions with patients would be beneficial to all HIV serodiscordant couples. It was recommended that follow-up sessions could enhance affected couples' experiences and help them cope with their condition. It was further established that, since hospital systems (HIV clinics within the hospitals) do not have any follow-up procedures, counselors were not obligated to follow up on couples, as participant H further attested:

I do have their contacts, but I cannot follow them up because it is not one of my duties. We have not been told to follow them up. We just test them for HIV and let them go. I wish that the hospital HIV clinics should have proper follow-up systems in place so that we should know when to follow those couples. Without follow-up, we end up not knowing what has happened to those couples after telling them the results. (Counsellor - Bokang)

Support groups

The importance of support groups is vital for all patients facing life-threatening and chronic diseases. The importance of the support system plays a vital role in improving the health status of all patients at large. According to responses collected, couples get a sense of belonging by being aware that not only they are living in serodiscordant relationship. Interacting with people living in similar conditions provides a basis for idea sharing, comparing notes, and pushing each other forward, as illustrated in the following excerpts:

“They (couples) can organise support groups for couples so that they can share their problems with other couples. The couples can also share how they have dealt with some challenges in the relationship, which can also assist others in coping.” (Counsellor - Rachel)

Sharing up-to-date information

To improve the support of HIV serodiscordant couples, some reported that if up-to-date information could be shared with them, this would help them to better understand these couples. Such information becomes vital toward ensuring that counselors provide answers to key questions posed by couples during counseling sessions and when asked by patients

on matters relating to HIV serodiscordant couples. Information improvement was noted as a key pillar to offering satisfactory counseling services, as noted in the following quote:

I need more information, in addition to the information that I have. The reason is that this will benefit couples because I want to see them leaving my office understanding when I tell them more regarding serodiscordant. (Counsellor Shosho)

In addition to sharing information, training was one of the important strategies to be used to share information, as shown below:

Training needs to be done, we need more information on that as the staff, and healthcare providers need more training when coming to HIV serodiscordant couples. This will help us to respond to the couples during counseling or anytime when they need information or ask any question. (Counsellor—Karabo)

Refresher training to improve their knowledge and remind them of existing information and knowledge would sharpen their skills for effecting counseling support services.

“We need refresher causes that are focusing on HIV serodiscordant to improve our knowledge. We see a lot of things such that some patients forced to see themselves being HIV positive.” (Counsellor - Nozi)

Discussions

This study explored the psychosocial support for counselors working with HIV serodiscordant couples. Three themes emanated from the findings namely: knowledge deficiency, lack of support, and ways of improving services for HIV serodiscordant couples. While effective counseling may contribute positively to discordant couples, this depends on the quality of counseling provided including being skilled, knowledgeable, and experienced in working with discordant couples. It is imperative that counselors be equipped and capacitated with capacity and development training to provide services effectively so that they may not experience challenges. Failure to be capacitated might have negative consequences on both couples and on the service delivery of healthcare. Counselors were seen to encounter some problems in the execution of their duties and service provision, which could be attributed to knowledge deficiency. This was a result of having limited information about HIV serodiscordance, a lack of knowledgeable sources on HIV serodiscordance, and incorrect information regarding HIV-serodiscordant counselors. Counselors further reported that not only did they not know much about HIV serodiscordance, but there is limited education and information on the condition among community members. This could be due to lack of sufficient knowledge and this limitation caused by a lack of training may affect the knowledge of both the counselors and the couples they are counseling, including the community at large. Counselors were inadequately educated to address the dynamic issues raised by couples, which often diminished the quality of their service delivery and their confidence in tackling problems. It is therefore recommended that capacity building and training should be enhanced and strengthened. Since the counselors' years of experience refers to all their entire years of experience, some had limited working experience in working with discordant couples, it could be clear that they had challenges in working with discordant couples. Collaborating with individuals who have HIV, and discordant couples involves different considerations and approaches. While both individuals and couples with HIV require

medical, emotional, and social support, the approaches differ due to the dynamics of personal versus relational contexts. Tailoring the support to address the unique challenges and needs of each scenario is essential for effective care and support.

Recent empirical studies have also highlighted that lack of knowledge, limited information, and even incorrect information about HIV-serodiscordant couples during counseling can result in lower-quality service being provided to couples and have implications in leaving several couples with misconceptions regarding the nature and dynamics of HIV-serodiscordant relationships. As reported by Crankshaw et al. (2014), the lack of or incorrect information leaves counselors doubtful of their ability to provide a quality service. This was reported to have influenced counselors to avoid interacting with HIV serodiscordant couples as a way of avoiding tough questions. Furthermore, counselors, nurses, and doctors interviewed by Crankshaw et al. (2014) suggest that HIV serodiscordant couples need specialized services that, to some extent, provide further advice and intervention.

In a study by Mavhandu-Mudzusi et al. (2014), it was discovered that the lack of adequate explanation of HIV serodiscordance by healthcare providers to couples contributes to their lack of understanding. Couples in the study their challenges faced were aggravated by poor counseling, which impacted them not understanding others and having limited knowledge on how to better manage the situation. With counselors lacking up-to-date information, their ability to serve couples is negatively affected, as corroborated by Crankshaw et al. (2014), who noted that the lack of or incorrect information leaves counselors doubtful of their ability to provide a quality service. This was reported to have influenced counselors to avoid interacting with HIV serodiscordant couples as a way of avoiding challenging questions. Other authors agree that there is a need for training, especially for counselors who are the first point of contact when dealing with HIV discordant couples. The need for further training for counselors was also noted by Van Dyk (2010) especially as a way of equipping counselors with pretest counseling expertise when expected to deal with both individuals and couples, as this will help them to be more in control to back up their work. According to Lelaka et al. (2022) counselors working with HIV serodiscordant couples were reported to be the main first contact and created a safe space, provided supported to couples by offering counseling and information giving services despite counseling not addressing issues related to HIV serodiscordancy. Among other recommendations made by USAID, PEPFAR, and AIDS Free (2010), further training of counselors was noted as crucial in providing information to couples about HIV serodiscordance, increased risk of transmission during each exposure, and prevention of HIV prevention of discordant couples. Having such information may assist the counselors in providing relevant information and clearing misconceptions related to HIV serodiscordance among couples.

Counselors reported receiving limited support from their institutions in equipping them with abilities to execute their duties. The lack of support highlighted includes inadequate training, and lack of debriefing. There is an overall lack of support provided to HIV serodiscordant patients in their health institutions. The limited training was considered inadequate in instances where counselors were inexperienced in the serodiscordancy field. Such challenges can influence the self-esteem and confidence of counselors as they are not able to share the challenges they face daily, which are related to HIV serodiscordant couples during the counseling sessions. Furthermore, this lack of or limited training of counselors may affect their knowledge, also the knowledge of those whom they are counseling,

including the community at large. Something needs to be done to improve the training, as failure to address this problem has a negative effect on the quality of health of the serodiscordant couples.

Counseling might leave counselors overwhelmed sometimes, it is important to share and reflect cases with colleagues. It is for this reason that the importance of debriefing was noted and reported as a valuable support service structure. This is a platform that can help counselors to share their experiences, share good and best lessons to be learned and approaches, reduce psychological hard and clear misconceptions. All this can be beneficial in providing support services to all counselors working with HIV serodiscordant couples. This is supported by Van Dyk (2010) and assert that debriefing provides counselors with a healthy, positive platform to share their emotions in dealing with complex cases of HIV serodiscordant couples. Van Dyk (2010) further argues that debriefing and training makes counselors and other healthcare providers feel more in control of their work and demanding situations become easier when they have enough knowledge and skills to back up their work. It is therefore imperative that employers take the importance of recognizing the importance of in-depth counseling training such as educational training and information giving, new updated/upgraded courses, webinars, seminars, and workshops to sharpen and strengthen skills and strengthen the on-the-job as part of ongoing refresher mentoring, training, and coaching. Van Dyk (2010). It is reported that the lack of debriefing exercises means that providers often lack updated information on the latest trends in HIV serodiscordance.

It is evident that there is insufficient support for serodiscordant couples, which may negatively influence their knowledge and the quality of their health, as it may lead to failure in preventing the transmission from one partner to the other. USAID et al. (2010) recommended that support for HIV serodiscordant couples must be provided. The author also recommends debriefing and further training of counselors to enable them to provide healthy, productive, and fruitful information to couples. The relevant information to couples includes messages such as the following: (i) HIV serodiscordance is common, (ii) HIV serodiscordants are likely to stay discordant for a period, (iii) HIV is not transmitted on every exposure, (iv) all of us are not immune from HIV and (v) it is possible to mitigate and prevent transmission in discordant couples. If counselors possess such key information, they will be in a better position to manage couple's questions and clear the common misconceptions among HIV serodiscordant couples.

Considering the limited support systems, improving the healthcare support of HIV serodiscordant couples was noted by counselors who expressed a need to introduce new, additional services that could be implemented to benefit couples. The participants suggested that support for couples should be intensified, and new services be made available and accessible to enhance the quality of health of HIV serodiscordant couples. Key among service improvements was the suggestion to implement follow-up sessions, support groups, and sharing up-to-date information with counselors. All these mechanisms will ensure counselors can track the progress of couples under their review. While this can become a valuable service to couples, following up can also be used as a performance appraisal tool to measure the success of counseling exercised. According to the National Institute of Allergy and Infectious Diseases (2019), they made it clear that since 2016 that serodiscordant couples should be offered ongoing support and counseling provided with ongoing counseling for further intervention and

management. The Institute noted that it is important for couples to continue to test, do follow-up and monitor themselves and be able to protect one another from the transmission of HIV. Follow-up sessions provide invaluable warning systems leading to the quick detection of any infections. This is also corroborated by Van Dyk (2010) who attested that follow-up visits are very important and necessary as they allow patients to continue learn more about their health condition, gather more knowledge as they ask further questions to reduce their anxieties and challenges, they face and talk about their fears and various problems they encounter.

Follow-up sessions and investing in support groups for both the infected and the affected individual couples are suggested by healthcare providers. Support groups can be powerful tools if used effectively, since they inform couples on their own challenges when they listen to other couples with similar challenges. The groups can also become an awareness and information conduct giving updates on any latest updates affecting serodiscordant couples. Baratedi et al. (2014) argue that support groups are a vital support system to HIV serodiscordant couples, and they improve their quality of life. The support groups were recommended as they allow couples to be open to social and health initiatives that are aimed at improving their psychological and physical health. A social support system not only reduce the fears, isolation, loneliness, and depression, they are also offering a powerful platform for discordant couples to trust in themselves in boosting their self-confidence in their relationships as they continue to trust one another, strengthens the sense of self-worth, and offers a positive and string life direction. Baratedi et al. (2014) further noted that HIV serodiscordant couples gain more knowledge into their diagnosis and openly discuss issues of being seropositive after they join support groups. However, there is a need to consider that privacy and confidentiality in groups might sometimes not be guaranteed, this should be managed with care should they support groups be implemented. Furthermore, there is a need to review the HIV counseling guidelines to accommodate counselors to continue to intervene and provide additional follow-up services since they can impact positively the lives of discordant couples.

As a method of improving service delivery and equipping counselors with enough information, it was submitted that a counselor is provided with up-to-date information, which they can utilize to share with HIV serodiscordant couples. Since there are often changes regarding HIV, this is due to the new developments of the research findings and new developments, counselors must be kept updated with such development trends provided through adequate training. Training with current information on the latest trends in the field of HIV/AIDS needs to be intensified. Furthermore, since information in the medical field changes often and current trends are discovered, frequent refresher training sessions on such new and latest developments are crucial and recommended. USAID et al. (2010) shows that, in some instances, counselors have been struggling to explain the meaning of HIV serodiscordance due to a lack of the latest new health and educational updates. This lack of new or latest information leads to a deep need for urgent training of counselors so that existing strategies and protocols implemented for HIV programs.

In return, this will ensure quality training is provided to counselors so that their understanding can be improved. Such clear input and updates can send powerful educational messages to counselors, and they will be able to develop risk reduction tools working with HIV serodiscordant couples and address misunderstanding and misconceptions surrounding HIV serodiscordance at large in their scope of work.

Introducing additional couple's services by counselors and other healthcare providers is key in helping couples go through their challenges. The WHO (2012) maintains that there are positive benefits for couples testing together, this includes disclosing their HIV status to each other, in that way they able to discuss and make decisions together as a couple, they can easily plan and exercise their sexual and reproductive health rights including safer conception. The same benefits can help those with different HIV results e.g., concordant couples and some studies also confirm that those who discover their HIV status are cap to practice safe risk behaviors; hence, it is crucial for healthcare providers to be sufficiently knowledgeable and be able to counsel couples and guide them in living with their condition.

Limitations of the Study

The study was qualitative research and took place only at one regional hospital, excluding other hospitals, such as local and regional hospitals. Due to the geographical nature of the study, the study only took place in an urban area, excluding other areas. Although discordant couples receive service from diverse healthcare providers such as nurses, doctors, the study was only limited to counselors working with HIV serodiscordant couples. Therefore, the study results cannot be generalized to other regional hospitals. Since counselors were on duty and had to consult with patients in between, the interview time had to be rescheduled to accommodate the time changes. It is therefore recommended that other mixed methods of research be explored to explore psychosocial support for counselors working with HIV serodiscordant. The study should also consider exploring other counselor's culture regarding serodiscordant and their understanding, to consider other local and tertiary hospital, including other areas such as rural areas.

Conclusion and recommendations

This paper explored the psychosocial support for counselors working with HIV serodiscordant couples at a regional hospital. A total of three themes emerged, namely: knowledge deficiency, lack of support, and ways of improving services to HIV serodiscordant couples. It is evident that counselors experience challenges in working with HIV serodiscordant couples, need support to be capacitated and to strengthen their services. To improve counselors' knowledge and to improve their service implementation in the healthcare sector, Policies and guidelines should be reviewed to provide a contextual framework for managing HIV serodiscordant couples. It is recommended that further studies be conducted to support and strengthen the training of counselors, other healthcare practitioners and HIV serodiscordant couples. A study of the impact of training to counselors on HIV serodiscordance and counseling services that are supported by mentoring and evaluation should be implemented, including providing a package of integrated comprehensive services to HIV serodiscordant couples.

Acknowledgments

The authors thank all the participants who took part in the study. We also thank the hospital for providing permission to conduct the study. The University of South Africa (UNISA) provided the student with the bursary, gratitude goes to the university too.

Disclosure statement

No potential conflict of interest was reported by the authors.

Data sharing statement

All participants were informed about the purpose of the study, and they provided consent that their responses in Table 1 and their quotes can be shared and published as pseudonyms to protect their identity.

Institutional review board statement

The University of South Africa, Department of Health's Ethics Committee provided the researcher with an ethical approval with reference number (HSHDC/6072017) on 6/04/2017.

Informed consent statement

Prior to data collection, all participants provided written consent. All the relevant and applicable ethical principles were observed. As anonymous.

References

- Allen, S., Meinzen-Derr, J., Kautzman, M., Zulu, I., Trask, S., Fideli, U., Musonda, R., Kasolo, F., Gao, F., & Haworth, A. (2003). Sexual behavior of HIV discordant couples after HIV counseling and testing. *Aids (London, England)*, *17*(5), 733–740. <https://doi.org/10.1097/00002030-200303280-00012>
- Baratedi, W. M., Thupayagale-Tsweneagae, G., & Gamba-Limando, M. (2014). Experiences of the HIV serostatus disclosure in serodiscordant couples in three urban areas in Botswana. *Life Science Journal*, *11*(11), 961–965.
- Brown, L., Trujillo, L., & Macintyre, K. (2003). Interventions to reduce HIV/AIDS stigma: What have we learned? *AIDS Education and Prevention*, *15*(1), 49–69. <https://doi.org/10.1521/aeap.15.1.49.23844>
- Bunnell, R. E., Nassozi, J., Marum, E., Mubangizi, J., Malamba, S., Dillon, B., Kalule, J., Bahizi, J., Musoke, N., & Mermin, J. (2006). Living with discordance: Knowledge, challenges, and prevention strategies of HIV-discordant couples in Uganda. *Aids Care-Psychological & Socio-Medical Aspects of AIDS/HIV*, *17*(8), 999–1012. <https://doi.org/10.1080/09540120500100718>
- Burton, J., Darbes, L. A., & Operario, D. (2010). Couples-focused behavioral interventions for prevention of HIV: Systematic review of the state of evidence. *AIDS and Behavior*, *14*(1), 1–10. <https://doi.org/10.1007/s10461-008-9471-4>
- Campbell, C., Skovdal, M., & Gibbs, A. (2011). Creating social spaces to tackle AIDS-related stigma: Reviewing the role of church groups in sub-Saharan Africa. *AIDS and Behavior*, *15*(6), 1204–1219. <https://doi.org/10.1007/s10461-010-9766-0>
- Chemaitelly, H., Awad, S. F., & Abu-Raddad, L. J. (2014). The risk of HIV transmission within HIV-1 sero-discordant couples appears to vary across sub-Saharan Africa. *Epidemics*, *6*, 1–9. <https://doi.org/10.1016/j.epidem.2013.11.001>
- Chihana, M. L., Conan, N., Ellman, T., Poulet, E., Garone, D. B., Ortuno, R., Wanjala, S., Masiku, C., Etard, J.-F., Davies, M.-A., & Maman, D. (2021). The HIV cascade of care among serodiscordant couples in four high HIV prevalence settings in sub-Saharan Africa. *South African Medical Journal*, *111*(8), 768–776. Retrieved August 2, 2021. <https://doi.org/10.7196/SAMJ.2021.v111i8.15489>
- Cohen, M. S., Chen, Y. Q., McCauley, M., Gamble, T., Hosseinipour, M. C., Kumarasamy, N., Hakim, J. G., Kumwenda, J., Grinsztejn, B., Pilotto, J. H., Godbole, S. V., Chariyalertsak, S.,

- Santos, B. R., Mayer, K. H., Hoffman, I. F., Eshleman, S. H., Piwowar-Manning, E., & Cottle, L. HPTN 052 Study Team. (2016). Antiretroviral Therapy for the Prevention of HIV-1 Transmission. *New England Journal of Medicine*, 375(9), 830–839. <https://doi.org/10.1056/NEJMoa1600693>
- Collins, P. Y., Holman, A. R., Freeman, M. C., & Patel, V. (2006). What is the relevance of mental health to HIV/AIDS care and treatment programs in developing countries? A systematic review. *AIDS*, 20(12), 1571–1582. <https://doi.org/10.1097/01.aids.0000238402.70379.d4>
- Crankshaw, T. L., Mindry, D., Munthre, C., Letsoalo, T., & Maharaj, P. (2014). Challenges with couples, serodiscordance and HIV disclosure: Healthcare provider perspectives on delivering safer conception services for HIV-affected couples, South Africa. *Journal of the International AIDS Society*, 17(1), 18832. Retrieved March 12, 2014. <https://doi.org/10.7448/IAS.17.1.18832>
- Guthrie, B. L., de Bruyn, G., & Farquhar, C. (2007). HIV-1-discordant couples in sub-Saharan Africa: Explanations and implications for high rates of discordancy. *Current HIV Research*, 5(4), 416–429. PMID: 17627505. <https://doi.org/10.2174/157016207781023992>
- Horvath, S., Zhang, Y., Langfelder, P., Kahn, R. S., Boks, M. P., van Eijk, K., van den Berg, L. H., & Ophoff, R. A. (2012). Aging effects on DNA methylation modules in human brain and blood tissue. *Genome Biology*, 13(10), R97. <https://doi.org/10.1186/gb-2012-13-10-r97>
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120–124. <https://doi.org/10.1080/13814788.2017.1375092>
- Lelaka, C. M., Moyo, I., Tshivhase, L., & Mavhandu-Mudzusi, A. H. (2022). Psychosocial support for HIV serodiscordant couples. *Health Psychology and Behavioral Medicine*, 10(1), 537–556. Retrieved June 16, 2022. <https://doi.org/10.1080/21642850.2022.2084098>
- Lingappa, J. R., Lambdin, B., Bukusi, E. A., Ngure, K., Kavuma, L., Inambao, M., Kanweka, W., Allen, S., Kiarie, J. N., Makhema, J., Were, E., Manongi, R., Coetzee, D., de Bruyn, G., Delany-Moretwe, S., Magaret, A., Mugo, N., Mujugira, A., Ndase, P., & Celum, C. (2008). Regional differences in prevalence of HIV-1 discordance in Africa and enrollment of HIV-1 discordant couples into an HIV-1 prevention trial. *PLoS One*, 3(1), e1411. Published Jan 9. <https://doi.org/10.1371/journal.pone.0001411>
- Mahajan, A. P., Sayles, J. N., Patel, V. A., Remien, R. H., Sawires, S. R., Ortiz, D. J., Szekeres, G., & Coates, T. J. (2008). Stigma in the HIV/AIDS epidemic: A review of the literature and recommendations for the way forward. *Aids (London, England)*, 22(Suppl 2), S67–S79. <https://doi.org/10.1097/01.aids.0000327438.13291.62>
- Maher, C., Hadfield, M., Hutchings, M., & De Eyto, A. (2018). Ensuring Rigor in Qualitative Data Analysis. *International Journal of Qualitative Methods*, 17 (1). <https://doi.org/10.1177/1609406918786362>
- Mavhandu-Mudzusi, A. H., Lelaka, M. C., & Sandy, P. T. (2014). The Experiences of HIV sero-discordant couples at the Perinatal HIV Research Unit in Soweto, South Africa. *Studies on Ethno-Medicine*, 8(2), 119–125. <https://doi.org/10.1080/09735070.2014.11917626>
- National Institute of Allergy and Infectious Diseases. (2019). <https://www.niaid.nih.gov/diseases-conditions/hiv-prevention>
- Orlando, M., Weber, S., Martinez, R., Cohan, D., & Seidman, D. (2017). Safer conception, and contraceptive counseling by providers of men living with HIV in San Francisco. *The Journal of the Association of Nurses in AIDS Care: JANAC*, 28(6), 964–970. <https://doi.org/10.1016/j.jana.2017.06.008>
- Poland, B. D. (1995). Transcription quality as an aspect of rigor in qualitative research. *Qualitative Inquiry*, 1, 290–310. <http://doi.org/10.1177/107780049500100302>
- Polit, D. F., & Beck, C. T. (2012). *Nursing research* (8th ed.). Lippincott Williams and Wilkins.
- Polit, D. F., & Beck, C. T. (2014). *Essentials of nursing research. Appraising evidence for nursing practice* (8th ed.). Lippincott Williams and Wilkins.
- Richards, K. A., & Hemphill, M. A. (2017). A practical Guide to collaborative qualitative data analysis. *Journal of Teaching in Physical Education*, 37, 225–231.
- Schneider, H., & Lehmann, U. (2010). Lay health workers and HIV programmes: Implications for health systems. *Aids Care-Psychological & Socio-Medical Aspects of Aids/hiv*, 22(Suppl 1), 60–67. <https://doi.org/10.1080/09540120903483042>

- Shelton, J. D. (2001). The Provider Perspective: Human after All. *International Family Planning Perspectives*, 27(3), 152–161. <https://doi.org/10.2307/2673838>
- Sherr, L., Lampe, F. C., Norwood, S., Leake-Date, H., Fisher, M., Edwards, S. G., & Anderson, J. (2011). Successive switching of antiretroviral therapy is associated with high psychological and physical burden. *International Journal of STD & AIDS*, 22(10), 600–605.
- Spino, A., Clark, M., & Stash, S. (2010). *HIV prevention for serodiscordant couples*. USAID | AIDS Support and Technical Assistance Resources, AIDSTAR-One Task Order 1.
- Van der Straten, A., Vernon, K. A., Knight, K. R., Gomez, C. A., & Padian, N. S. (2000). Managing HIV among serodiscordant heterosexual couples: Serostatus, stigma and sex. *Aids Care-Psychological & Socio-Medical Aspects of Aids/hiv*, 10(5), 533–548. <https://doi.org/10.1080/09540129848406>
- Van Dyk, A. C. (2010). *HIVAIDS care & counselling: A multidisciplinary approach*. Pearson South Africa.
- West, N., Schwartz, S., Phofa, R., Yende, N., Bassett, J., Sanne, I., & Van Rie, A. (2016). “I don’t know if this is right . . . but this is what I’m offering”: Healthcare provider knowledge, practice, and attitudes towards safer conception for HIV-affected couples in the context of Southern African guidelines. *Aids Care-Psychological & Socio-Medical Aspects of Aids/hiv*, 28(3), 390–396. <https://doi.org/10.1080/09540121.2015.1093596>
- World Health Organisation. (2012). *Guidance on couple HIV testing and counseling including anti-retroviral for treatment and prevention in sero-discordant couples: Recommendations for a public health approach*. WHO.