Introduction

Two-thirds of people living with HIV and AIDS (PLWHA) in the world today live in sub-Saharan Africa (World Health Organization, 2012). This has a bearing on the number of older people living with HIV on the continent. In South Africa, the prevalence of HIV infection among older adults continues to increase (Chang et al., 2019). Possible reasons for rising HIV prevalence in the older age group in South Africa include increased rate of new infections and the aging HIV population (Butler et al., 2018). It is important that people living with HIV are aware of their diagnoses, engage with HIV treatment care, access antiretroviral therapy (ART) and consistently adhere to ART to achieve effective viral suppression (Butler et al., 2018; Dodd et al., 2010). Despite improvement in engagement rates, there are still serious gaps evident at every stage along the HIV care continuum among the older population living with HIV (Pence et al., 2012). The Centers for Disease Control and Prevention (CDC) estimates that of the 25 million Africans living with HIV, 90% are not appropriately retained in HIV care, 63% are not involved in ART, and 70% have detectable HIV viral loads (VL) (Johnson et al., 2017). This gap in HIV care and access to treatment has serious implications for new infections. Moreover, racial and/or ethnic disparities persist in many spheres of health outcomes with black sub-Saharan African communities disproportionately represented in the lower socioeconomic strata with high rates of undiagnosed HIV (Singh et al., 2018).

The present study focuses on older black adult heterosexuals diagnosed with HIV infection as part of a larger study that looking into adherence to ART by the same cohort in a study in Ga-Rankuwa in Gauteng province. In line with the consistent National HIV Behavioural Surveillance System of the CDC, the authors defined high risk heterosexuals as those with social connections in urban areas that have elevated rates of socioeconomic deprivation and HIV prevalence (Johnson et al., 2014). Heterosexual sex is the highest common route of HIV transmission in South Africa, accounting for almost 60% of newly diagnosed HIV infections among both in men and women (Lane et al., 2006). This has shifted the traditional notion where men who have sex with men (MSM) has always been classified as a high-risk group that has topped HIV infection statistics among different social groups (Iwuji et al., 2018). Many people affected by HIV infection tend to present late at treatment centres, raising the possibility of spreading the infection before getting treatment (Nyashanu & Serrant, 2016). For example, many heterosexual men commence treatment at a point when their CD4 count is very low, prompting faster progression to AIDS than men in other risk categories (Müller et al., 2010). Furthermore, heterosexual women living with HIV also exhibit delayed entry to care and treatment compared to men with attendant poor outcomes.
(Stall et al., 2008). Considering the factors that impede or promote engagement with HIV treatment services, high-risk heterosexual social groups are under studied compared to other groups, such as MSM and individuals who inject drugs (Widman et al., 2013). This is because most public health researchers have focused more on generally known high-risk social groups while lacking an accepted definition of heterosexuals as a vulnerable group.

Many older heterosexual adults may be less likely to use condoms because they no longer worry about pregnancy. This lack of condom use indicates that older heterosexual adults tend to think that HIV and AIDS are not relevant to them (Risher et al., 2015). Heterosexuals typically see HIV as an issue for known vulnerable groups, such as MSM, sex workers and individuals who inject drugs (Nguyen & Holodniy, 2008). This mindset deters many heterosexuals from engaging in regular HIV testing, prompting shock and disbelief when they are infected by HIV. More importantly, fear of distress and HIV infection, as well as high levels of stigma, can discourage people from taking HIV tests in communities in general, including black sub-Saharan African (BSSA) communities (Lowther, 2018). This stigma is associated with high discriminatory practices embedded in various cultural practices (Becker et al., 2019).

Being infected with HIV in later life is often very difficult to accept because of the notion that “it’s not for me, but for them” (Oraka et al., 2018). This notion also drives older adults often to exclude themselves from any initiatives associated with HIV testing and screening, making it difficult for them to engage with treatment and counselling services following an eventual HIV diagnosis. Considering the issues discussed above, this article set out to explore the impact of and reaction to HIV infection among older adults at the point of diagnosis in South Africa.

**Methodology**

**Methods**

This study utilised a qualitative exploratory design that included a purposive sample of older HIV-infected men and women currently receiving HIV healthcare services from a treatment centre in a public hospital in Gauteng province (Mason et al., 2010). This approach was determined to be appropriate as a means of gaining access to the inner world of older men and women to understand the issues affecting their reaction following a positive HIV test. Based on the day and time preferences of participants, interviews were conducted in a private room at the clinic or at the university by two research assistants: one female and one male. The gender preference of interviewers was left to participants to enhance relaxation and sharing of silences during the interview (Mumtaz et al., 2003).

**Recruitment and sampling**

Recruitment was achieved with the assistance of healthcare professionals treating older persons at an HIV treatment centre in a public hospital in Gauteng province. In the first instance, the researchers wrote a letter to the head of the treatment centre asking the centre to invite their patients to take part in the research. The head of the treatment centre, a senior professional nurse, then approached older HIV-positive individuals and requested their permission for referral to the researchers who had experience in collecting qualitative data. Only those older people who had expressed their willingness to take part in the research had their names forwarded to the researchers to organise and schedule an interview. The researchers determined whether the referred potential research participants met the study’s inclusion criteria. They informed them about the study and obtained their written consent to participate. The population of this study was purposively selected to include older persons (male and female) as they would best contribute the information needed for the study (De Vos et al., 2011). The researcher recruited 12 participants (Table 1): seven women and five men who met the study’s inclusion criteria. Participants had to be over the age of 50 at the time of being diagnosed with HIV and had to have been on ART for at least six months. Participants who had only recently been diagnosed, that is, within a period of less than six months, were excluded because of the possible emotional impact of discovering that they were HIV-positive (Thames et al., 2012). A saturation point was realised after interviewing 12 research participants.

**Participants**

Overall, older PLWHA were more likely to be married or cohabiting, although some had never married. All females were unemployed or retired, while some males were unemployed and others worked part-time. Eleven participants had little formal education and only one had a high school diploma (Table 1).

**Data collection**

Data were collected using face-to-face semi-structured interviews. After obtaining informed consent from the participants and furnishing them with an information sheet explaining the research, face-to-face semi-structured interviews were conducted by two experienced research assistants who were not involved in the main study procedures to limit bias (Ruiz-Cantero et al., 2007). Eleven interviews were conducted in African languages preferred by participants while one participant chose to do the interview in English. The eleven interviews in vernacular languages were translated into English for analysis. A semi-structured interview guide with interview questions which included open-ended, exploratory questions and additional follow-up probing questions that allowed participants to discuss the topics that were relevant to their experience was utilised (Doody & Noonan, 2013). Domains of inquiry included issues of emotions, stigma, and disclosure. Data saturation was reached following 12 interviews, i.e., when no new categories or themes emerged. Appendix 1 shows the semi-structured questions interview schedule.

**Data analysis**

A thematic analysis underpinned by the four phases of data analysis in the Silences Framework was utilised to identify themes (Serrant-Green, 2011; Braun & Clarke, 2006). In phase 1, the researchers read the transcripts repeatedly to identify and ascertain the accounts that were important to the research participants. Themes were identified and supported by quotations. In phase 2, the researchers took the draft from phase 1 to the research participants for verification.
of the themes and quotations used to support them. The research participants were contacted in the same way they had been contacted for the interviews to confirm the data. In phase 3, the confirmed draft from phase 2 was taken to the collective voice group. This was a group of older people who had been diagnosed with HIV but had not taken part in the research study. The idea was to subject the findings to a critical associative eye to enhance validity (Serrant-Green, 2011). The collective voice group was recruited through the HIV clinic at the same time as the research participants and was made up of six participants who critically discussed the findings from phase 2 to confirm whether they resonated with what they had experienced following their HIV-positive diagnosis. The reviews were verbal and not recorded; however, the researchers took notes to aid the confirmation and validity of the results through an associative eye. In phase 4, the researchers analysed the output from phase 3 to form the final output of the research study which was presented as the main findings. Figure 1 shows the phases of the Silences Framework.

| Ethical considerations |
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The study protocol was reviewed and approved by the Sefako Makgatho University Research Ethics Committee (#SMUREC/H/132/2017:IR). Informed written consent was obtained after the study was explained to potential participants, including potential risks and benefits. The research participants were also given an information sheet. In addition, participants were informed of the voluntary nature of the study and that they could withdraw from it at any time and were not under any obligation to answer questions they did not want to. Standard precautions were undertaken to assure the confidentiality of the data. All interviews were conducted in a private room within the HIV clinic or at the university, depending on the participants’ preference. Codes were used in place of participants’ names. Only the researchers had access to the data.

| Results |
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Following analysis of the data collected, several themes regarding the impact on and reaction of older adults following HIV diagnosis emerged, including anger and shock, feeling suicidal, blaming, fear of stigma and discrimination, loss of trust and intimacy, fear of disclosure to new partners and denial.

| Anger and shock |
|-----------------|

Participants narrated anger and shock following their diagnosis of HIV. They were angry that they were HIV-positive and shocked that they would have a backlash from the community:

*When I got home, I told my family that I’m HIV-positive and I’m going to kill myself…I felt so angry with myself for not listening to health promotion messages* (Male, 55 years).

*Honesty, I was shocked and filled with anger knowing how our community views everyone who is HIV-positive…I just felt like taking my life to avoid experiencing nasty things waiting for me* (Female, 60 years).

| Feeling suicidal |
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The research participants reported feelings of being suicidal once they were told that they were HIV-positive. Some regarded it as a death sentence, despite the availability of high quality ART:

*When the doctor told me that I was HIV-positive…I just felt that I needed to jump over the cliff and leave this life because I just viewed this new situation as a death sentence* (Male, 65 years old).
When the news came to me that I was HIV-positive, I just said to myself there is no future for me...all I need is kill myself before it kills me; it is honestly a death sentence (Female, 69 years old).

**Fear of disclosure to new partners**

The research participants found it difficult to disclose their HIV status to new partners for fear of losing them. They reported being in a dilemma over their new relationships and HIV status:

- I was really in dilemma; I felt that if I disclose that I am HIV-positive, my new partner will leave me... on the other hand, I was afraid that if he discovers it he will report me to the police for not disclosing... honestly, it was one of the most difficult times of my life (Female, 59 years old).

- I was torn in between...I just felt like keeping quiet about my HIV status knowing the stigma and discrimination of our community, but my other thought was fearful of being reported once my partner found that I did not disclose to her my HIV status...It was really a hard time to make a decision (Male, 69 years old).

**Denial**

As a coping mechanism and to prevent the stigma and discrimination, upon being told about their positive HIV status, the research participants reported actively searching for an alternative diagnosis from traditional healers. They reported complete denial of the results from the doctor:

- I asked them not to take me to the hospital but rather to traditional healers. I once heard that if you get sick and they give you an injection you do not get healed. The traditional healer gave me Rooibos tea; I don't know what she mixed it with. I did not get better and that was it; when I went back for the second time, I didn’t find her; she disappeared (Female, 69 years old).

- I could not believe it; how can I be HIV-positive of all the people...I was convinced that the doctor was missing the cause of my illness...I straight away went to the Sangoma (African traditional healer) who told me that I was ill because one my forefathers had committed murder and I needed to have a cleansing ceremony which I had, but the illness never went away until I went back to the hospital for HIV treatment (Male, 60 years old).

- When I was told about my positive HIV status, I couldn’t believe it...I started to think about people who didn’t like me in the community and I knew that one of them must have bewitched me...I had no option but to go to the traditional healer who confirmed my suspicion, but the sickness did not go away until I went back to my doctor for treatment (Male, 72 years old).

**Discussion**

This study set out to explore the impact of and reaction to HIV infection among older adults in Ga-Rankuwa, South Africa. Participants responded differently when they were first informed of their HIV status.
Anger and shock following diagnosis of HIV can prevent affected individuals from engaging with counselling and treatment services (Cain et al., 2013). The anger and shock may emanate from the perception of the affected individuals that they will be blamed by their communities for being HIV-positive (Beer et al., 2019). In this study, most of the research participants narrated feelings of anger and shock following their positive HIV diagnosis. Such feelings were exacerbated by fear of stigma they would experience in the community, thereby negatively affecting their engagement with HIV treatment services. In light of this finding, there is a need for the sexual health and HIV services to initiate concurrent programmes for HIV health promotion, testing and counselling services in communities as a way of encouraging older adults to take up HIV testing while getting support from counselling services. Such a set up can encourage the normalisation of testing and easier engagement with treatment services among older adults (Roura et al., 2009). There is also a need for the central government to roll out HIV initiatives that are targeted at older adults who seem to be slipping through the HIV prevention and testing safety net.

Suicidal feelings following HIV diagnosis is not new in the history of HIV infection (Schlebusch & Govender, 2015). Such feelings were prevalent in the early 1980s and 90s in many low- and middle-income countries where ART was very expensive and out of reach for ordinary people. In this study, the research participants reported feelings of being suicidal once they were made aware of their HIV-positive status. This was exacerbated by the long-standing belief in communities that being HIV-positive is equated with a death sentence (Mackinnon, 2018). It is therefore important that sexual health promotion in communities should include clear information on the availability of high-quality ART and evidence of normal life expectancy following HIV-positive diagnosis, provided the individual takes ART as instructed by medical professionals. More importantly, resilience among recently diagnosed older adults should be inculcated through health promotion, community support and availability of counselling in communities, which will enhance easy access to HIV services (Ferreira, 2019).

Members of religious and secular organisations, among others, have been reported as blaming HIV-positive individuals in communities for their condition (Kraaij et al., 2008). Such blame has deterred HIV-positive individuals from taking their ART, leading to relapse and subsequent critical illness or death. The research participants blamed their partners for their HIV-positive status. This feeling of blame undoubtedly has a lasting impact on the relationships of affected partners, with possible secondary impacts on their health and wellbeing outcomes (Lather, 1997). It is therefore important that health promotion in communities should emphasise positive health outcomes between partners after diagnosis of HIV. The absence of such messages in community health promotion has led to blame and counter-blame between partners (Daniels et al., 2019). More importantly, there is a need to enlighten communities on the existence of quality ART that can lead to a normal life expectancy to mitigate blame and reduce arguments between partners, since blame and arguments may result in negative health outcomes.

Stigma and discrimination towards HIV-positive individuals have continued despite concerted health promotion campaigns against these (Ansari & Gaestel, 2010). The research participants expressed fear of stigma and discrimination due to their new HIV diagnosis. Such fear, as alluded to earlier on, can be a source of relapse and disengagement with treatment services following a positive HIV diagnosis. More inclusive interventions to reduce HIV stigma and discrimination in communities are needed to accommodate newly diagnosed older adults in a community (Auerbach & Beckerman, 2010). Furthermore, the central government should strive to engage community leaders and other gatekeepers to tap their influence when fighting against HIV stigma and discrimination (Nyashanu & Serrat, 2016). This is an initiative that has been tried and tested in many communities, such as the Ubuntu Pathways project under the Heart of England NHS Foundation Trust, and has yielded positive results.

Loss of trust and intimacy is usually experienced by partners who feel that they have been let down by their partners following an unexpected HIV diagnosis (Viljoen et al., 2021). Following their HIV diagnosis, the research participants reported loss of trust and intimacy with their partners, sometimes leading to divorce or them remaining without partners for long periods. It is important that counselling services for couples should run alongside HIV testing centres to provide a one-stop centre for services (WHO, 2012). This can enable early intervention to prevent loss of intimacy and trust among couples following a positive HIV diagnosis.

Disclosure following HIV infection has always been challenging in many communities (Seeley et al., 2019). This is more difficult in older adults than young couples because the former have lived without HIV for long periods (Cahill & Valadéz, 2013). Disclosure or partner notification is a highly challenging issue among couples living with HIV as it can cause disputes in the relationship. The research participants found it difficult to disclose their HIV status to new partners for fear of losing them. They reported being in a dilemma over their new relationships and HIV status. It is therefore important that new initiatives to get rid of HIV stigma should be explored. Such initiatives should be specific to the culture and orientation of the affected individuals (Koschorke et al., 2017).

HIV infection at an older age can lead to a lack of assertiveness in affected individuals in disclosing their status, which can result in misunderstandings and eventual infection of partners (Tsang et al., 2019). This is normally caused by older adults’ denial of the HIV infection owing to community-based sentiments against the condition. The research participants reported actively searching for an alternative diagnosis from traditional healers to make their condition acceptable in the community and avoid the backlash that comes with stigma and discrimination (Aude et al., 2014). There is thus a need to provide informative health promotion and information on the dangers of delaying HIV treatment. More importantly, traditional healers should be educated on the symptoms of HIV so that they can quickly identify affected individuals and direct them to HIV treatment centres without delay.
Implications for practice

• Sexual health professionals need to assess and consider the HIV needs of older adults to make sure that they are not overlooked in sexual health promotion initiatives.
• Sexual health promotion initiatives targeted at older adults are needed to increase uptake of HIV testing and avoid late diagnosis amongst this group.
• Innovative support systems for older people living with HIV need to be included in the present health system.

Limitations of the study

This research was conducted in Ga-Rankuwa only and did not include other townships in Gauteng province. It would be ideal to include all big cities in South Africa in future research to enhance comparison and possible generalisability. The research was purely qualitative in nature and could not therefore tackle issues that need quantitative research methods. A research study utilising mixed research methods could provide comprehensive findings covering the ontological and epistemological positions of both research approaches.

Concluding comments

There is an urgent need to improve sexual health and HIV services catering for the needs of older adults. Health promotion initiatives targeting older adults are needed to prevent negative sexual health and HIV outcomes following HIV diagnosis. Furthermore, HIV testing and prevention, including counselling services should be offered to older adults just as they are to younger people to ensure that no one is overlooked by the intervention.

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Note

1. A full data transcription is available on request, provided a robust data management plan is provided to the two institutions by the requesting parties.

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References

Ansari, D. A., & Gaestel, A. (2010). Senegalese religious leaders’ perceptions of HIV/AIDS and implications for challenging stigma and discrimination. Culture, Health & Sexuality, 12(6), 633–648. https://doi.org/10.1080/13691051003736253
Auerbach, C., & Beckerman, N. L. (2010). HIV/AIDS prevention in New York City: Identifying sociocultural needs of the community. Social Work in Health Care, 49(2), 109–133. https://doi.org/10.1080/00981380903158011
Beer, L., McCree, D. H., Jeffries, W. L., IV, Lemons, A., & Sionean, C. (2019). Recent US Centers for Disease Control and Prevention activities to reduce HIV stigma. [JIAPAC]. Journal of the International Association of Providers of AIDS Care, 18. https://doi.org/10.1177/2325958218823541
Becker, T. D., Ho-Foster, A. R., Poku, O. B., Marobel, S., Mehta, H., Cao, D. T. X., Yang, L. S., Blank, L. I., Dipatane, V. I., Moeng, L. R., Molebatsi, K., Eisenberg, M. M., Barg, F. K., Blank, M. B., Opondo, P. R., & Yang, L. H. (2019). “It’s when the trees blossom”: Explanatory beliefs, stigma, and mental illness in the context of HIV in Botswana. Qualitative Health Research, 29(11), 1566–1580. https://doi.org/10.1177/1049732319827523
Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa
Butler, I., MacLeod, W., Majuba, P. P., & Tipping, B. (2018). Human immunodeficiency virus infection and older adults: A retrospective single-site cohort study from Johannesburg. South Africa. Southern African Journal of HIV Medicine, 19(1), 838. https://doi.org/10.4102/sajhivmed.v19i1.838
Cahill, S., & Valadéz, R. (2013). Growing older with HIV/AIDS: New public health challenges. American Journal of Public Health, 103(5), e7–e15. https://doi.org/10.2105/AJPH.2012.301161
Cain, R., Jackson, R., Prentice, T., Collins, E., Mill, J., & Barlow, K. (2013). The experience of HIV diagnosis among Aboriginal people living with HIV/AIDS and depression. Qualitative Health Research, 23(6), 815–824. https://doi.org/10.1177/1049732313482525
Chang, A. Y., Gómez-Olivé, F. X., Manne-Goehler, J., Wade, A. N., Tollman, S., Gazzano, T. A., & Salomon, J. A. (2019). Multimorbidity and care for hypertension, diabetes and HIV among older adults in rural South Africa. Bulletin of the World Health Organization, 97(1), 10–23. https://doi.org/10.2471/BLT.18.217000
Daniels, J., De Vos, L., Mogos, W., Olivier, D., Shamu, S., Mdua, M., Klausner, J., & Medina-Marino, A. (2019). Factors influencing sexually transmitted infections disclosure to male partners by HIV-positive pregnant women in Pretoria townships, South Africa: A qualitative study. Sexual Health, 16(3), 274–281. https://doi.org/10.1071/S1547181717042114
De Vos, A. S., Delport, C. S. L., Fouché, C. B., & Strydom, H. (2011). Research at grass roots: A primer for the social science and human professions. Van Schaik Publishers.
Dodd, P. J., Garnett, G. P., & Hallett, T. B. (2010). Examining the promise of HIV elimination by ‘test and treat’ in hyperendemic settings. AIDS (London, England), 24(5), 729–735. https://doi.org/10.1097/QAD.0b013e32833433fe
Doody, O., & Noonan, M. (2013). Preparing and conducting interviews to collect data. Nurse Researcher, 20(5), 28–32. https://doi.org/10.7748/nr2013.05.20.5.28.e327
Ferreira, H. J. (2019). Health and physical education professionals’ salutogenic and pedagogical practices for working with disadvantaged older adults. Repositório Institucional UNESP. http://hdl.handle.net/11444/190299
Iwujii, C. C., Ome-Gliemann, J., Larmarange, J., Balesire, E., Thiebaut, R., Tanser, F., Okesola, N., Makowa, T., Dreyer, J., Herbst, K., McGrath, N., Bärnighausen, T., Boyer, S., De Oliveira, T., Rekacewicz, C., Bazin, B., Newell, M. L., Pillay, D., Gab, F., Rekacewicz, C., & the ANRS 12249 TasP Study Group. (2018). Universal test and treat and the HIV epidemic in rural South Africa: A phase 4, open-label, community cluster randomised trial. The Lancet. HIV, 5(3), e116–e125. https://doi.org/10.1016/S2352-3018(17)30205-9
Johnson, L. F., Dorrington, R. E., & Moolla, H. (2017). Progress towards the 2020 targets for HIV diagnosis and antiretroviral treatment in South Africa. *Southern African Journal of HIV Medicine, 18*(1), 694. https://doi.org/10.4102/sajhivmed.v18i1.694

Johnson, N. B., Hayes, L. D., Brown, K., Hoo, E. C., & Ethier, K. A. (2014). CDC National Health Report: Leading causes of morbidity and mortality and associated behavioral risk and protective factors — United States, 2005–2013. *Morbidity and Mortality Weekly Report (Suppl. 2014 Oct 31), 63*(4), 3–27. https://www.cdc.gov/mmwr/pdf/other/su6304.pdf

Koschorke, M., Evans-Lacko, S., Sartorius, N., & Thornicroft, G. (2017). *The Stigma of Mental Illness — End of the Story?* (pp. 67–82). Cham: Springer. https://doi.org/10.1007/978-3-319-27839-1_4

Kraaij, V., van der Veek, S. M., Garnefski, N., Schoevers, M., Witlox, R., & Maes, S. (2008). Coping, goal adjustment, and psychological well-being in HIV-infected men who have sex with men. *AIDS Patient Care and STDs, 22*(5), 395–402. https://doi.org/10.1089/apc.2007.0145

Lane, T., Pettifor, A., Pascoe, S., Fiamma, A., & Rees, H. (2006). Heterosexual anal intercourse increases risk of HIV infection among young South African men. *AIDS (London, England), 20*(1), 123–125. https://doi.org/10.1007/978-1-85243-671-0_10

Lather, P. A. (1997). *Troubling the angels: Women living with HIV/AIDS*. MA thesis, *Surviving a death sentence*.

Mumtaz, Z., Salway, S., Waseem, M., & Umer, N. (2003). Gender-based barriers to primary health care provision in Pakistan: The experience of female providers. *Health Policy and Planning, 18*(3), 261–269. https://doi.org/10.1093/heapol/czg032 PMID:12917267

Nguyen, N., & Holodniy, M. (2008). HIV infection in the elderly. *Journal of Research in Nursing, 16*(6), 420–429. https://doi.org/10.1177/1744987108312771

Oraka, E., Mason, S., & Xia, M. (2018). Too old to test? Prevalence and correlates of HIV testing among sexually active older adults. *Journal of Gerontological Social Work, 61*(4), 460–470. https://doi.org/10.1080/01634372.2018.1454565

Pence, B. W., O'Donnell, J. K., & Gaynes, B. N. (2012). Falling through the cracks: The gaps between depression prevalence, diagnosis, treatment, and response in HIV care. *AIDS (London, England), 26*(5), 656–658. https://doi.org/10.1097/QAD.0b013e2823519aae

Risher, K., Mayer, K. H., & Beyrer, C. (2015). HIV treatment cascade in MSM, people who inject drugs, and sex workers. *Current Opinion in HIV and AIDS, 10*(6), 420–429. https://doi.org/10.1097/COH.0000000000000200

Roura, M., Urassa, M., Busza, J., Mbata, D., Wringe, A., & Zaba, B. (2009). Scaling up stigma? The effects of antiretroviral roll-out on stigma and HIV testing. Early evidence from rural Tanzania. *Sexually Transmitted Infections, 85*(4), 308–312. https://doi.org/10.1136/sti.2008.033183

Ruiz-Cantero, M. T., Vives-Cases, C., Artazcoz, L., Delgado, A., García Calvente, M. M., Miqueo, C., Montero, I., Ortiz, R., Ronda, E., Ruiz, I., & Valls, C. (2007). A framework to analyse gender bias in epidemiological research. *Journal of Epidemiology and Community Health, 61*(Suppl 2), i46–i53. https://doi.org/10.1136/jech.2007.062034

Schlebusch, L., & Govender, R. D. (2015). Elevated risk of suicidal ideation in HIV-positive persons. *Depression Research and Treatment, 2015, 609172. doi:10.1155/2015/609172*

Seeley, J., Bond, V., Yang, B., Floyd, S., MacLeod, D., Viljoen, L., Phiri, M., Simuyaba, M., Hoddinott, G., Shanaube, K., Bwalya, C., de Villiers, L., Jennings, K., Mwanza, M., Schaap, A., Dunbar, R., Sabapathy, K., Ayles, H., Bock, P., ... Fidler, S., & the HPTN 071 (PopART) study team. (2019). Understanding the time needed to link to care and start ART in seven HPTN 071 (PopART) study communities in Zambia and South Africa. *AIDS and Behavior, 23*(4), 929–946. https://doi.org/10.1007/s10461-018-2335-7

Serrant-Green, L. (2011). The sound of ‘silence’: a framework for researching sensitive issues or marginalised perspectives in health. *Journal of Research in Nursing, 16*(4), 347–360. https://doi.org/10.1177/1744971109358249

Singh, S., Song, R., Johnson, A. S., McCray, E., & Hall, H. I. (2018). HIV incidence, prevalence, and undiagnosed infections in US men who have sex with men. *Annals of Internal Medicine, 168*(10), 685–694. https://doi.org/10.7326/M17-2082

Stall, R., Friedman, M., & Catania, J. A. (2008). Interacting epemics and gay men’s health: a theory of syndemic production among urban gay men. In Richard J. Wolitski, Ron Stall, & Ronald O. Valdiserri (Eds.), *Unequal opportunity: Health disparities affecting gay and bisexual men in the United States (pp. 251-274).* Oxford Scholarship Online. https://doi.org/10.1093/acprof:oso/9780195301533.003.0009

Thames, A. D., Streif, V., Patel, S. M., Panos, S. E., Castellon, S. A., & Hinkin, C. H. (2012). The role of HIV infection, cognition, and depression in risky decision-making. *The Journal of Neuropsychiatry and Clinical Neurosciences, 24*(3), 340–348. https://doi.org/10.1176/jnp.201110340

Tsang, E. Y. H., Qiao, S., Wilkinson, J. S., Fung, A. L. C., Lipeleke, F., & Li, X. (2019). Multilayered stigma and vulnerabilities for HIV infection and transmission: a qualitative study on male sex workers in Zimbabwe. American Journal of Men’s Health, *13*(1). https://doi.org/10.1177/1557988318823883

Vijloen, L., Wedman, D., Hoddinott, G., Bond, V., Seeley, J., Bock, P., Fidler, S., Reynolds, L., & the HPTN 071 (PopART) team. (2021). The act of telling: South African women’s narratives of HIV status disclosure to intimate partners in the HPTN 071 (PopART) HIV prevention trial. *Women’s Health (London, England), 17*. https://doi.org/10.1177/145506581982004

Widman, L., Golin, C. E., Grodensky, C. A., & Suchindran, C. (2013). Do safer sex self-efficacy, attitudes toward condoms, and HIV transmission risk beliefs differ among men who have sex with men, heterosexual men, and women living with HIV? *AIDS and Behavior, 17*(5), 1873–1882. https://doi.org/10.1007/s10461-011-0108-7

World Health Organization (WHO). (2012). Guidance on couple’s HIV testing and counselling including antiretroviral therapy for treatment and prevention in serodiscordant couples: Recommendations for a public health approach. Geneva: World Health Organization.
Appendix 1. Interview schedule

Semi-structured interview guidance (impact of and reaction to HIV infection)

1. Can you tell us about the good things you are getting from the community in terms of support?
   (a) Prompts
2. Can you tell us your story about how you found out that you were HIV-positive and how you reacted?
   (a) Prompts throughout the story where needed
3. How did you feel when you were told that you were HIV-positive?
   (a) Prompts
4. Who did you tell first that you were HIV-positive and how did the person react?
   (a) Prompts
5. How difficult was it to disclose that you were HIV-positive and why?
   a) Prompts
6. What do you think needs to be done to help people who have been diagnosed with HIV to disclose this to family and friends?
7. Since you were diagnosed HIV-positive, what are the challenges that you have come across?
   (a) Prompts
8. How do you think these challenges can be resolved?
   (a) Prompts