

Experiences of intimate relationships, stigma, social support and treatment adherence among HIV-positive adolescents in Chiredzi district, Zimbabwe

Christopher Jimu, Kaymarlin Govender, Roselyn Kanyemba & Marie-Jeanne Offosse Ngbesso

To cite this article: Christopher Jimu, Kaymarlin Govender, Roselyn Kanyemba & Marie-Jeanne Offosse Ngbesso (2021) Experiences of intimate relationships, stigma, social support and treatment adherence among HIV-positive adolescents in Chiredzi district, Zimbabwe, African Journal of AIDS Research, 20:3, 214-223, DOI: [10.2989/16085906.2021.1979059](https://doi.org/10.2989/16085906.2021.1979059)

To link to this article: <https://doi.org/10.2989/16085906.2021.1979059>



Published online: 11 Oct 2021.



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



View related articles [↗](#)



View Crossmark data [↗](#)

Research Article

Experiences of intimate relationships, stigma, social support and treatment adherence among HIV-positive adolescents in Chiredzi district, Zimbabwe

Christopher Jimu^{1*} , Kaymarlin Govender² , Roselyn Kanyemba²  & Marie-Jeanne Offosse Ngbesso¹ 

¹Psychology, School of Applied Social Sciences, University of KwaZulu-Natal, Durban, South Africa

²Health Economics and HIV and AIDS Research Division, University of KwaZulu-Natal, Durban, South Africa

*Correspondence: chrisjimu@gmail.com

This study explored experiences of intimate relationships, stigma, social support and treatment adherence among HIV-positive adolescents in Chiredzi district, Zimbabwe. The study adopted an interpretive qualitative methodology to explore the intricacies of living with HIV as an adolescent. Thirty ($N = 30$) adolescents aged between 13 and 19 years participated in this study. They were recruited while attending social support or during their routine visits to collect antiretrovirals. In-depth interviews were conducted to generate data. Adolescents were asked about their romantic lives and the difficulties they faced while living with HIV. Findings revealed that adolescents living with HIV (ALHIV) are confronted with stigma and discrimination. They also grapple with emotional issues such as dealing with disclosure. However, social support minimises the risk of harbouring suicidal thoughts. To the various challenges ALHIV face, most of them (particularly males) adopt several coping mechanisms. These include (but are not limited to) non-disclosure of their seropositive status to sexual partners, thereby risking reinfection and exposing their partners to HIV. Non-disclosure of seropositive status contributed to either poor antiretroviral therapy (ART) adherence or defaulting on HIV medication. A life-cycle approach to HIV prevention and management is crucial to mitigating the challenges faced by ALHIV because risks of HIV infection, challenges of access to HIV services and solutions to these challenges change at different stages of someone's life. This scenario justifies the necessity of a holistic bio-psychosocial approach to managing HIV among adolescents, not only limited to the client, but also involving appropriate education programmes for the broader community.

Keywords: ART adherence, adolescents living with HIV (ALHIV), disclosure, discrimination, sexual behaviour

Introduction and background

This study explores experiences of intimate relationships, stigma, social support and treatment adherence for HIV-positive adolescents in Chiredzi district, Zimbabwe. HIV has evolved from being an acute fatal disease to a manageable chronic condition due to improvements in detection, treatment and prevention (Russell et al., 2007; Curran et al., 2014). Despite these improvements, the number of adolescents¹ (defined as persons aged 10–19 years in this study) dying due to AIDS-related illnesses tripled between 2000 and 2015, the only age group to have experienced a rise in deaths (UNICEF, 2015). Adolescents living with HIV (ALHIV) might have acquired the disease through vertical or horizontal transmission (UNAIDS, 2012). However, living with HIV is difficult because the disease is highly stigmatised and associated with promiscuity and death, despite the strides made in treatment that prolongs life.

Adolescence is perceived as a bridge or transition from childhood to adulthood. This period is characterised by sexual development, sexual debut, risk taking and stressful

social role challenges (van Zantvliet et al., 2020). Living with HIV is especially difficult for adolescents because this phase of life is a formative period where identity is established and intimate sexual relationships are initiated. ALHIV are likely to experience stigma and discrimination, as such they are more likely to maintain their confidentiality by not disclosing their seropositive status to a romantic partner because one's status as sick is not desirable, particularly for adolescents (Toska et al., 2015). The quality of adolescents' future lives largely depends on how successfully they negotiate this stage of life, especially ALHIV who are more likely to experience stress that emanates from grappling with emotional issues of disclosure, and rejection from caregivers or peers as a result of their seropositive status (Bekker & Hosek, 2015). Research suggests that the burden of disease in adulthood is due to risk behaviours that began in adolescents and shaped future adult behaviours (Kar et al., 2015; Machado et al., 2016).

Findings from a survey conducted in Uganda in 2011 revealed that adolescents had their sexual debut at 15 years of age. Further, the lack of experience among this

group culminated in inconsistent condom use and amplified the rate of pregnancy and HIV infection (Ankunda et al., 2016). Therefore, understanding the experiences of ALHIV is critical to exploring a biomedical intervention that focuses on reducing onward transmission among this group. This is particularly important, given that some of the ALHIV engage in intimate relationships and grapple with emotional issues such as dealing with status disclosure.

Evidence from studies in sub-Saharan Africa (SSA) attests that ALHIV engage in risky sexual behaviours that contribute to new HIV infection (Zgambo et al., 2018; Sandy et al., 2019). However, little is known about the impact of the vulnerability posed by HIV on the transition and identity of adolescents. Many studies tend to focus on evaluating social support programmes for ALHIV. A study by Willis et al. (2019) in rural Gokwe South in Zimbabwe evaluated a multi-component programme to improve ART adherence and retention of medication caring for ALHIV. Mavhu et al. (2020) highlighted the effects of a differentiated service delivery programme on ALHIV’s virological failure in rural Shamva and Bindura in Zimbabwe. Apart from the fact that most of these studies were done in rural Zimbabwe, the current study’s sampled population was from both rural and urban settings in Chiredzi. Furthermore, there is a dearth of studies focusing on the experiences of intimate relationships, stigma, social support and treatment adherence for ALHIV in SSA, particularly Chiredzi district in Zimbabwe. This study aims to bridge that information gap.

Study context

This qualitative study was conducted in Chiredzi district in Zimbabwe with ALHIV because the area has been

understudied despite its long history of child prostitution stretching from the 1960s (Mafirakureva, 2019). A detailed geographical analysis of Zimbabwe’s HIV epidemic indicates that areas linked to transport corridors, increased commercial activities and mining activities were identified as HIV hotspots (Phillips, 2019). Chiredzi district is an HIV hotspot because of sugar production and commercial alcohol operations that started in the 1960s. Additionally, because of its proximity to South Africa, some parents cross the border to South Africa in search of greener pastures, leaving behind their children, who reportedly engage in prostitution, resulting in an upsurge of child prostitution (Mafirakureva, 2019). Chiredzi district is located in Masvingo Province, which recorded a worrisome 14.9% HIV prevalence and came fourth in 2016 in a country with 10 provinces (Figure 1).

Despite high HIV prevalence rates in Masvingo, many studies have been focusing on urban centres and cities such as Harare (Kidia et al., 2014). By 2018, 85% of the 2.1 million HIV-positive adolescents in the world lived in SSA (Slogrove et al., 2017). Zimbabwe is a landlocked country in SSA. More so, Zimbabwe’s HIV prevalence is among the highest in the world, standing at 12.8% in 2019 (UNAIDS, 2019), something which may hinder the attainment of the universal target to end the AIDS epidemic by 2030 (UNAIDS, 2020). A comparison of new infections in Zimbabwe shows that Chiredzi district lies among the top 15 districts with the highest infections in 2017 (Zimbabwe Estimates HIV Report, 2018; see Figure 2). Harare and Bulawayo contribute the largest number of new infections, followed by Gokwe South district. However, Chiredzi district had the highest number of new infections in Masvingo Province. This ranking is worrying, particularly in the context of the remarkable progress in mitigating new infections in Zimbabwe.

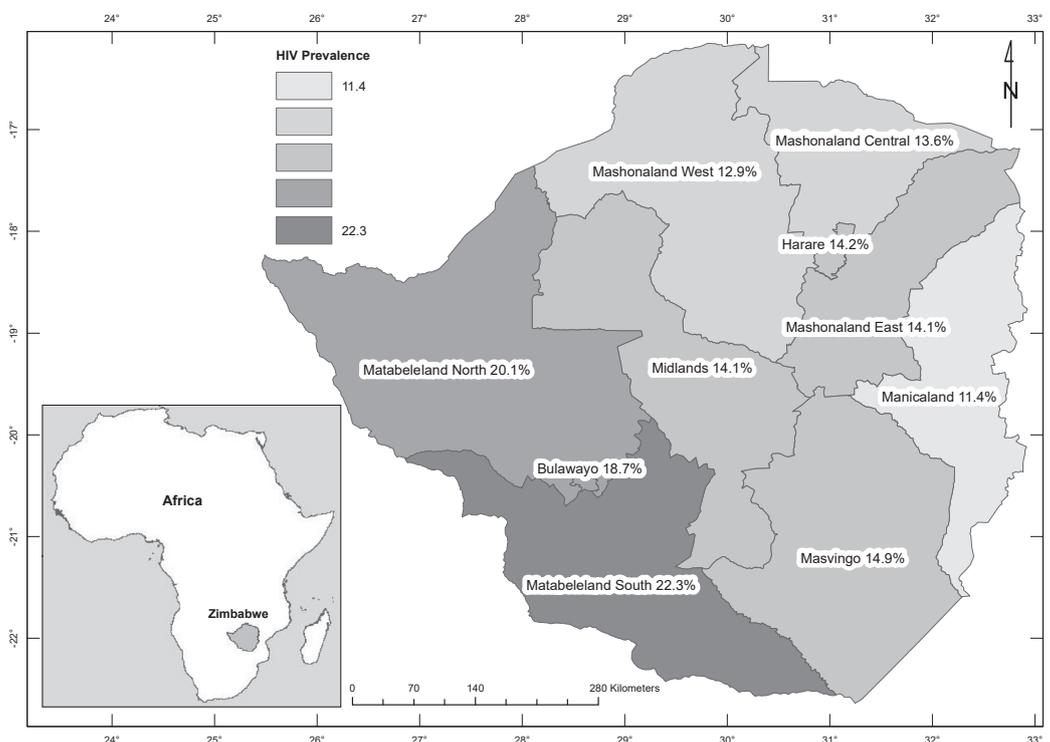
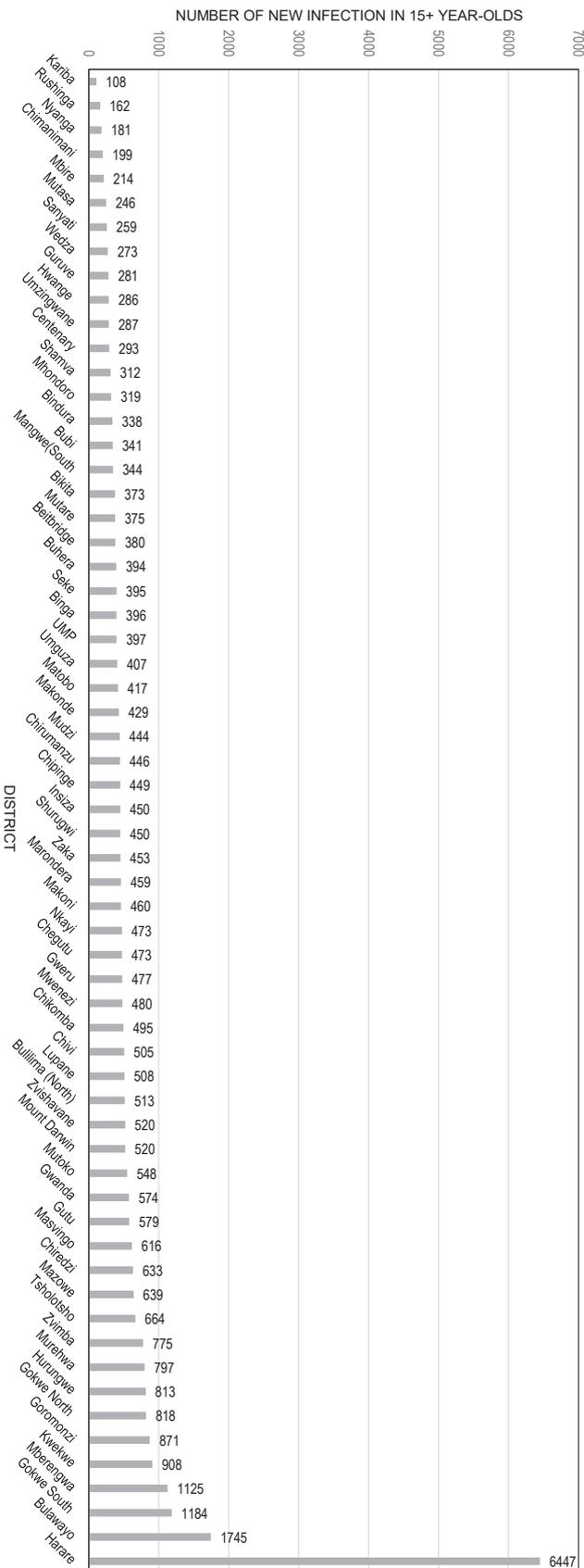


Figure 1: Prevalence of HIV in Zimbabwe by province (Source: Zimbabwe population-based HIV impact assessment, (ZIMPHIA, 2015))

Figure 2: Estimated new adult HIV infections by districts (15+) (Source: Zimbabwe HIV Estimates Report (2018))



This article draws on critical information on adolescents' experiences of living with HIV in the contexts of their quest to be in intimate relationships and the strategies that they employ to cope with stigma associated with HIV. The study seeks to contribute more robust strategies that can urgently inform innovative and targeted interventions that support ALHIV. Findings from this study contribute to the existing field of knowledge on ALHIV and may inform policy formulation and practice aimed at reducing new infections in Zimbabwe. The study identifies social support as an important variable in the prevention of illnesses such as HIV. It also assists ALHIV, particularly in the context of promoting health, therapeutic compliance, safer sex and recovery from illness (Mavhu et al., 2017).

Theoretical framework

We used George Engel's bio-psychosocial model (1980). The theory proposes that systems exist within systems and that nothing exists in isolation. It proposes that biological, psychological and sociocultural factors act simultaneously to shape people's health. Similarly, we argue that the challenges of ALHIV are viewed within the context of the family, the community and the peers with which adolescents interact. Therefore, understanding the experiences of ALHIV in contexts of stigma and social support can help practitioners and policy makers improve their response to the needs of this group. The behaviours of ALHIV can only be explained in relation to the context within which they occur.

Methodology

This study adopted an interpretive qualitative methodology to understand the experiences of ALHIV, with particular reference to stigma, intimate relationships, social support and ART adherence. The qualitative approach was appropriate to this study as we sought to understand the experiences of ALHIV, something we could not adequately explore if we had adopted a quantitative approach, which is often limited to statistical analysis. Participants provided informed consent. Those below the age of 18 (legal age of majority in Zimbabwe) were requested to provide consent letters from their parents or legal guardians. Further, they provided assent to participate in the study.

Ethical clearance for this study was granted by the University of KwaZulu-Natal's Biomedical Research Council (BREC) (Protocol number: BE475/19). The study protocol was also submitted to the Medical Research Council of Zimbabwe and clearance was granted (MRCZ/B1794). Data were collected through in-depth interviews with ALHIV from October to December 2019. These interviews had a duration of approximately 45 minutes. Interviews were adopted because of their flexibility when collecting sensitive information because they provide a platform for non-verbal communication, adding clarity for both parties (Harding, 2013). Initial access to the participants was negotiated through hospital administration and researchers (the principal researcher and two research assistants [male and female, both with honours degrees in psychology and counselling respectively]) were introduced to the participants.

Subsequently, the participants were informed about the study and voluntarily accepted to be interviewed. All the participants were given Shona pseudonyms. The use of pseudonyms was in line with the ethical principle of confidentiality. We used purposive sampling to recruit 30 adolescents aged between 13 and 19 years. They were accessing HIV services at Chiredzi General Hospital. A counsellor was available to reassure the participants of professional support in case of emotional trauma that could arise from the interviews, thus operating in line with the ethical principle of 'first, do no harm' (*primum non nocere*) (Neuman, 2014).

To obtain the rich data required to understand adolescents' experiences of living with HIV, a pilot test of the interview guide was conducted with five participants before the main study was done. Adolescents who participated in the pilot study had similar characteristics to those who participated in the main study, but were excluded from participating in the main study. Piloting was done two weeks before the main study and modifications to the interview guide were done.

Permission to audio record interviews was sought verbally and through informed consent forms. To minimise participants' fear and anxiety about discussing their HIV status, the interviews were conducted in a quiet and secluded space that fostered trust, i.e. counselling rooms at the hospital. Participants were not only recruited based on their availability, they also had to meet the inclusion criteria:

- (1) Living with HIV, on ART and have disclosed status to parents, guardians and researchers;
- (2) Between 13 and 19 years old; and
- (3) Willing to participate in the study without expecting payment (participants' transport costs were reimbursed).

The exclusion criteria were:

- (1) Participants who had not signed informed consent; and
- (2) Participants who were acutely sick during the time of the research.

Data collection schedule

Data were collected in three stages.

- Stage 1: In-depth interviews were held with all 30 participants, using open-ended questions. Such questions allowed the researcher to take a holistic and comprehensive look at the issues under study because the responses permit participants to provide more options and opinions, giving the data more diversity than would be possible with a yes/no question.
- Stage 2: Repeat interviews were conducted with 15 participants. The second stage interviews were a follow-up on issues that were not well explained during the first stage interviews. Participants for the second stage interviews were identified from the first stage and these were invited for repeat interviews. These were participants who had shown that they had extensive knowledge of the topic under investigation, but had failed to articulate issues. The goal of the second stage interviews was to get richer information than that obtained during the first stage interviews in which some participants appeared to withhold some information, partly because of the sensitivity of the topic. The second stage interviews were semi-structured, which allowed the participants time to open-up about sensitive issues and the researchers to probe in a much

more sensitive way. This allowed researchers to compare previous and current data from the same participants.

- Stage 3: From the participants who were interviewed in stages 1 and 2, five were further interviewed for the third time because of their willingness to share more experiences in relation to the topic.

Data analysis

An inductive approach was used to define themes. This means that themes are strongly linked to research findings and the theoretical lens (Patton, 1990). Interviews that were audio recorded in Shona, a dominant language spoken in Chiredzi district, were translated into English during transcription. Efforts were made to enhance accuracy and clarity through intercoder reliability because the process of data transcription was done by many researchers (Nyambuya et al., 2021). Thematic analysis was used to analyse data following the six stage method described by Braun and Clarke (2006). Transcripts were later entered into Nvivo (QSR International, Melbourne, Australia) software for coding. While our analysis prioritised important themes based on how often they were raised by participants, the full spectrum of experiences, including divergent accounts, were also considered.

Findings

The importance of social support

Most participants highlighted that at some point they wanted to commit suicide, while others denied this, but informational social support from the Internet and social groups on survival stories facilitated acceptance and played an influential role in minimising the risk of harbouring suicidal thoughts. Hence, participants longed to live a quality life. This finding is similar to other studies (Agnew-Brune et al., 2019; Willis et al., 2019). One participant reported:

I was afraid when I was first told that I was HIV positive. I spent sleepless nights, stressed and thinking about what to do next. I even thought of committing suicide. However, when I researched on the Internet and attended a social support group, I realised that I could still survive on ARVs (Tinomudaishe, 19-year-old male).

Survivor accounts on the internet equipped Tinomudaishe with significant knowledge that he could still live a quality life when adhering to HIV medication (ARVs). Another participant who attended a social support group explained:

After I was told about my status, I never contemplated committing suicide. I learned of my status at the age of ten. At that age, I did not know anything about being HIV positive. Through social support and HIV/AIDS education at school, I accepted my status especially when my mother comforted me and I was already on medication (Shovo, 14-year-old female).

Emotional social support from a significant other (the mother) helped Shovo to accept her status. ALHIV who did not attend social support groups reported experiencing shame, and consequently isolated themselves. Feelings of worthlessness were prevalent in the absence of social support. This increases the difficulty that adolescents face

in accepting their status, except for those who attend social support programmes.

Social support session attendance emphasised the importance of observing review dates, hence promoting ART adherence and maximising the quality of life. Attending social support groups also helped to minimise risky sexual behaviours such as unprotected sex. Furthermore, it helped to improve mental and emotional well-being, particularly by eliminating suicidal thoughts. One participant shared the following:

At social support sessions, we are taught to take our medication correctly. We sometimes play the 'soldier game', which emphasises correct taking of medication because if we stop, our antibodies (soldiers) will be weakened by HIV; hence, the name soldier game (Dhurango, 19-year-old male).

It emerged that ALHIV develop a sense of belonging during social support sessions when they meet as a group and make friends (appraisal social support). Attending support groups also helps to build resilience, especially in the face of discrimination. The close contact and the trust established among ALHIV peers were mentioned as positive outcomes that promote ART adherence. The following was shared in an interview:

Sometimes I forget how certain pills are taken, but at the social support meetings, we meet peer educators who remind us because they work with nurses and they know almost all the pills that we take (Kuda, 15-year-old male).

Social support is pivotal to ART adherence as adolescents are equipped with information that effectively helps them adhere to their treatment. At the same time, psychosocial support earned through support groups is significant as it improves retention of and adherence to ARV medication. The importance of group activities and spaces to meet other ALHIV encouraged discussion and coping with experiences involving the HIV-positive adolescent.

However, there were some limitations where social support groups impacted negatively on new infections. One male participant who attended social support said the following: *If you are infected, find someone to infect too (Tinashe, 18-year-old male).*

The need to spread the virus was the catalyst for risky, unprotected sexual behaviours. This negative influence was attributed to group friends during social support group meetings. In this case, social support is to some extent limited in terms of preventing risky sexual behaviours and new infections among this group.

Masculinity and ART adherence

Male participants exhibited rebellious attitudes towards HIV medication, probably because of masculinity norms in the region which emphasise rebellious identities as a sign of being a 'real man'. When asked if he knew anything about the importance of ARV drugs, one male participant responded by saying that he knew that ARVs improved the quality of life, but sometimes when he is with friends, he cannot risk being seen taking medication as this is seen as an obstruction to their chances of getting sex. The participant said:

Taking medication imposes restrictions on my party life with my friends. I can't excuse myself from a

party because it's time to take medication or excuse myself because I need to get back home to take my medication. I may take them later, remember there will be beautiful girls and if they see you taking ARVs, you won't have a chance to find a hit and run chick [girl] (Takunda, 19-year-old male).

Owing to experiences of masculinity, boys either delay taking their medication or deny their seropositive status. Hegemonic masculinity norms proved to have a strong hold on male ALHIV, thereby affecting how they took their medication. A popular 'hit and run'² saying among male adolescents was the main cause for new infections and denying having an HIV-positive status.

One participant explained how he would rather die than compromise his masculinity by being seen taking medication by his friends:

It's better to die than to be seen taking medication. That will be my end. So whenever I am with my friends, I don't take medication because I want to be the same with them. Because of poor ART adherence, I am now taking second-line medication because my viral load had risen (Vunganai, 15-year-old male).

When asked why they do not excuse themselves for a few minutes to take medication in a private space, participants offered no solid answer. Most adolescents admitted to just going with the flow and did not see the importance of excusing oneself from the crowd to take their routine medication. Arguably, hegemonic masculinity and the need to be identified as HIV negative among men amplifies AIDS mortality rates and treatment failures, a common factor reported among this group. The meaning behind the statement '*its better to die than to be seen taking medication*' signifies that HIV is still a well kept secret, apart from boys hiding it from their romantic partners who may deny them sex otherwise. As a result, statistics on new infections will maintain an upward trajectory due to the unprotected sexual behaviour common among adolescents.

Reported sexual behaviours

In terms of romantic relationships, participants were worried about transmission of infection to their sexual partners, even among those who have not yet had romantic or sexual experiences. The general consensus was that sexual relationships must be characterised by responsibility and extreme caution. One participant said: *When you think of having sex, you can't help but think what if I transmit the virus to my partner? You can't help but think about it (Tsitsi, 18-year old female).*

The idea of disclosing one's seropositive status to sexual partners was unanimous among the participants. However, when to tell and at what stage of the relationship to disclose one's HIV-positive status are questions accompanied by anxieties and worries. One male participant said:

I have a girlfriend and she knows about my HIV status because I disclosed it to her. We have had sex twice. However, on both occasions we used protection (Taona, 18-year old male).

The main argument for postponing disclosure was fear of rejection and abandonment.

To tell your partner about your HIV-positive status, you must be strategic. You have to be with them for some time, make sure they love you, otherwise you will be rejected and hurt (Chido, 19-year-old female).

From the above sentiments, it can be argued that disclosure is reserved for close relationships. Further, disclosure is sustainable only after a thorough examination of the person's worth in knowing the other's status.

Stigma and discrimination

Despite the numerous HIV and AIDS campaigns in Zimbabwean schools, adolescents still face discrimination, which impacts negatively on their self-esteem and psychological well-being. Discrimination against ALHIV is documented in previous studies in SSA (Ashaba et al., 2018; Petersen et al., 2010). As a result, many participants feel isolated and stressed. Most of the participants showed that adolescents were experiencing the actual burden of enacted stigma. One of the participants related the stigma experienced at high school thus:

At school there were some guys who used to see me taking pills. They said that they no longer wanted to play with me. I had to excuse myself (Tinomudaishe, 19-year-old male).

From the above assertion, ALHIV are at risk of experiencing stress and depression, hence they face difficulties in navigating the transition from adolescence to adulthood. Depressive moods, irritability, anxiety, stress, family conflicts and feelings of anger were reported as some of the responses to stigma. The following was shared:

Sometimes I feel very angry with my life and with everyone who sidelines me because of my status. I sometimes wish bad luck on them, like wish that they will also get HIV. During these times, I fight with my friends and family a lot (Nyasha, 14-year-old female).

Stigma was not only a menace from outsiders. Sadly, even family members subjected ALHIV to stigma. A participant that endured stigma by family members said:

When my family members buy snacks or cookies, they avoid eating them together with me. They put mine in a separate plate. I even use separate soap, blankets and cutlery (Nhamoinesu, 18-year-old male).

Participants' responses showed that the public does not have adequate knowledge about HIV and AIDS. After almost four decades battling with the HIV and AIDS pandemic, this chronic condition is still shrouded in myths and misinformation which tend to perpetuate stigma and discrimination. One participant highlighted how stigma contributed to ALHIV's poor performance at school:

I used to do Fashion and Fabrics at school. Nobody dared touch or use my sewing machine whenever I left it behind. It used to stress me a lot and even my academic performance dropped (Hama, 13-year-old female).

Stigma and discrimination affected ALHIV's psychological well-being, leading to internalised stigma, depression and anger.

To avoid being victims of stigma, ALHIV would seek clinical support from health facilities situated far from their

communities. One participant reported that she came from another town, yet she was collecting her medication from Chiredzi because she feared being identified at her local clinic. She said:

I do not collect my medication from my local clinic because if people see me collecting from there, they will isolate me. My mother accompanies me to this clinic [Chiredzi] because no one knows us here. I cannot come for social services as I do not have money for transport (Chipo, 13-year-old female).

The problem of travelling long distances often led to poor attendance of social support programmes as Chipo noted that she only gets her ARV medication from Chiredzi, far from her place of residence. Furthermore, the problem of adolescents travelling long distances to seek medical care and access social support meant that they were more likely to miss review dates, something which impacted ART adherence.

Participants also revealed that they were collecting their ARV medication secretly to protect their status from being revealed. Fear of rejection by colleagues and romantic partners was the reason for the secrecy. One participant said:

When I see a girl I like at the hospital, I don't collect my medication. I will just make some rounds at the hospital until she is gone. However, if that girl is also taking their medication, then I can also take mine at that moment (Tawanda, 19-year-old male).

For most participants in this study, the quest to belong and maintain the secret regarding their HIV status defined their lives. They indicated that careless talk about the virus could bring discomfort, embarrassment and the risk of rejection due to the stigma associated with HIV.

Discussion

Experiences of living with HIV: The need for special attention among adolescents

This research has examined the psychosocial experiences of ALHIV through personal narratives and obstacles faced in the context of living with a chronic disease that is highly stigmatised. The common theme that runs through ALHIV's accounts was the quest for normality and equality in everyday life. On the one hand, normality was threatened by the need to access care that appears endless through treatment and routine medical consultations. On the other hand, normality was threatened through living with the secret of being HIV positive and the possibility of transmitting the virus to sexual partners. These findings are consistent with those of previous studies (Li et al., 2010; George & Lambert, 2015). In their transition to adulthood, adolescents' quest for freedom, individualism, concrete reasoning capacity and the need to identify with others increase the chances of new HIV infections among this group (Bekker & Hosek, 2015). ALHIV face the challenge of living with a chronic illness, coupled with the dilemma of disclosure especially to romantic partners because they fear being stigmatised and rejected, which further complicates their access to health care services (Feyissa et al., 2019).

Pertinent issues reported by ALHIV in this study touched on stigma and the fear of being rejected by romantic partners once they learnt about their status. Moreover, adolescents reported experimenting with unprotected sex, resulting in

new HIV infections (UNAIDS, 2018a). Our findings dovetail with previous studies conducted in SSA which concluded that peer counselling is effective in offering emotional support, promoting safer sex and fostering adherence to clinical support suitable for ALHIV (Toth et al., 2018; Willis et al., 2019). Similarly, findings from the current study have shown that social support is effective in discouraging suicidal thoughts and minimising feelings of shame and worthlessness among ALHIV.

Disclosure of an HIV-positive diagnosis to peers proved to be difficult because revealing one's HIV status exposes the individual to social stigma, prejudice and discrimination. These aspects are widely identified in the adult population living with HIV and AIDS (Hosek et al., 2000). Stigma and discriminatory attitudes that dehumanised ALHIV were commonly cited as negatively affecting adherence to medication. Similar results have been documented in previous researches in SSA (Ashaba et al., 2018; Petersen et al., 2010; Willis et al., 2019). Enacted stigma and community stigma were both reported, which resulted in many ALHIV resorting to risky coping strategies such as non-disclosure of their HIV status to romantic partners, unprotected sex and defaulting on medication. These risky coping strategies often result in new infections and premature deaths (Toska et al., 2015).

Stigma and discrimination were the major factors hindering adherence to medication among ALHIV, hence they affected the quality of their lives. A study conducted in Uganda also concluded that stigma was the main hindrance to adolescents' ART adherence and quality of life among school-going teenagers living with HIV (Kimera et al., 2019). Communities hold misconceptions about HIV and AIDS. The findings from a study conducted in Zimbabwe highlighted that HIV was perceived as unacceptable and associated with prostitution (Kidia et al., 2014).

Findings from this study demonstrate that male adolescents were more unlikely to disclose their status or default their medication because of their ego (a product of hegemonic masculinity) than their female counterparts. Even though males have their masculine behaviours and tendencies which influence non-disclosure of their HIV status, both sexes in the current research described a cycle that they went through. The cycle starts when adolescents hide their status from their partners. As sanctioned by the largely patriarchal society in Zimbabwe, some female participants in this research mentioned that they could not insist on safe sex through the use of condoms during sex. As such, their male counterparts would decide when and how to have sex. Risky unprotected sex was reported by both male and female participants. They reported that they faced difficulties in disclosing their HIV-positive status. This meant the non-disclosure of one's HIV-positive status to romantic partners, which heightened the risk of engaging in unprotected sex. While there has been a decrease in new HIV infections among all the other populations, there has been a marked rise in HIV incidence among adolescents, accounting for 37% of all new infections (UNICEF, 2018).

HIV status disclosure improves general mental health as it effectively reduces secrecy and improves condom use (Hayfron-Benjamin et al., 2018). If parents, health care workers and adolescents are not educated about HIV and

AIDS, global targets of attaining an AIDS-free generation by 2030 may not be feasible. The World Health Organisation (WHO) recommends that adolescents should be empowered with knowledge so that they know the right time for partial and full disclosure. This significantly reduces new infections. Thus, there is a possibility of meeting global targets of a 75% AIDS-free generation by 2030 (UNAIDS, 2017).

Health practitioners should develop and implement interventions at both community and society level. Notably, adolescents are inextricably linked to the social ecosystem that encompasses the family and the school in the broader community (Mburu et al., 2014). Further, ALHIV are likely to be orphaned and live in hostile family environments characterised by discrimination (Ramaiya et al., 2016; Telisinghe et al., 2016). The current study demonstrates that stigma and discrimination can influence ALHIV to default on ARV treatment, adopt risky sexual behaviours and resort to poor ART adherence. Therefore, it is imperative that health practitioners should adopt a holistic approach, that is, the biomedical approach to mitigate the unpleasant HIV and AIDS-related experiences. Thus, HIV and AIDS education must be offered at schools and in wider communities to create protective environments for ALHIV.

Social support: A safe corner for adolescents

Evidence from this study supports the view that multiple social support packages should be adopted. Emotional social support has been found to effectively buffer stress-related problems, while informational social support plays an influential role in supporting adolescents with the right knowledge (Mavhu et al., 2017). As such, the current study demonstrated that offering an optimum combination of appraisal, informational and instrumental social support to ALHIV can be an effective therapeutic intervention linked to safe practices such as disclosure of status to romantic partners, adherence to medication and increased self-confidence. Further, adolescents reported that social groups are their safe stress-free corners where they learn about ART adherence, safe sexual practices and testimonies from others on how to improve the quality of life. Thus, social support may be an effective variable in ensuring a successful transition from adolescence to adulthood.

Comprehensive sexuality and HIV and AIDS education

It emerged that a lot still needs to be done to promote health and well-being among ALHIV, perhaps through sexuality education, counselling and social support, as this group continues to be stigmatised and discriminated against. Again, adolescents are indulging in risky behaviours as statistics on new infections and treatment failures are worrying among this population.

Research evidence has demonstrated the effectiveness of sexuality and HIV and AIDS education in promoting the quality of life among ALHIV (UNESCO, 2016). There is a need for the endorsement of comprehensive sexuality education (CSE) to impart the right information among ALHIV. HIV and AIDS education must not mainly focus on adolescents, but on various other stakeholders, including the communities where stigma and discrimination have been found to be rampant. For instance, the government of Zimbabwe should consider incorporating aspects of

CSE into the school curriculum for every child to benefit, depending on age, gender and level of education. Gender-focused interventions are more effective than 'gender-blind' programmes, particularly in promoting critical thinking and sexual and reproductive health education. These two are significant to reducing unintended pregnancies, stigma and discrimination, thereby promoting safer sex behaviours.

Strategic distribution of condoms and financial support

Often, adolescents start experimenting with sex when they are between 13 and 19 years old (Ankunda et al., 2016). While reasons for poor condom distribution have been cited, there is a need to adopt more effective condom distribution programmes. In Zimbabwe, sex is seen as the preserve of married couples. Such cultural values often promote risky sexual behaviours. For example, participants in this study mentioned that they would avoid buying condoms in public places because they were afraid of being seen. In some places in Chiredzi district, condoms are reported to be sold; thus, some participants reported the lack of money to buy these protective paraphernalia. This requires that stakeholders adopt a more strategic initiative in distributing condoms. One such strategy is to install condom dispensers in public toilets and even in toilets at schools. Although sexuality and HIV and AIDS education is offered to adolescents in primary and secondary schools in Zimbabwe, most educators are not taking the subject seriously because it is only mentioned for conformity to international standards. It can be argued that if condoms are strategically distributed where adolescents can access them without being noticed, new HIV infections among adolescents will be significantly reduced.

Cash flows can help build the resilience of adolescents by providing financial incentives, thereby enabling them to travel to hospitals for routine medical check-ups and the much-needed instrumental social support (UNAIDS, 2018b). In addition, offering financial support is on its own a way of offering the actual social protection that adolescents need, which greatly reduces risky sexual behaviours among females and deviant, risky behaviours among men. For instance, criminal acts, unprotected sex and substance abuse can be mitigated through income-generating programmes, vocational training and microfinance programmes as standalone schemes that reduce poverty among unemployed ALHIV (Lorenzetti et al., 2017; Pega et al., 2017).

Peer support interventions

Peer support interventions are more responsive, acceptable and relevant to encourage adolescents to seek medical attention and remain engaged in HIV care (WHO, 2018). The bio-psychosocial approach proposes that the best practice to mitigate challenges facing ALHIV is to put them at the forefront when making laws and formulating policies, for instance through peer counselling (Bekker & Hosek, 2015). There is evidence to support the view that peer support interventions help to minimise stigma and discrimination, especially in communities where ALHIV live (Armstrong et al., 2018; Willis et al., 2019). For instance, the Zvandiri model of community adolescent treatment supporters (CATS) in Zimbabwe offers differentiated services to ALHIV to increase linkages and ART adherence among

among ALHIV. Evidently, this programme is effective and is recognised by WHO as one of the best innovations in this area (WHO, 2019). In support, data from Zimbabwe's 161 sites revealed that 976 ALHIV were recruited through CATS, and 947 of 976 (94%) were initiated on ART and 909 were retained after six months (Willis et al., 2019).

In addition, the local Zimbabwean Friendship Bench (FB) model has also proved to be the best fit locally, particularly in terms of reducing suicidal ideation and improving ART adherence among people living with HIV. These findings are congruent with other studies (Chibanda et al., 2017; Verhey et al., 2020). Detailed descriptions of the FB intervention model can be found elsewhere (Chibanda et al., 2016). Therefore, adopting models similar to Zvandiri with its famous CATS or the Zimbabwean FB programme may be significant in reducing new HIV infections among adolescents.

Limitations of the study

While this study reflected on the experiences of ALHIV, it has some limitations. The findings cannot be generalised to other places because a small sample was used. In addition, the study also relied on self-reported narratives. There is a need for a quantitative study that identifies the relationship between stigma and ART adherence, and examines the extent to which social support effectively benefits ALHIV. However, the strength of the current study lies in its geographical location, which makes its contribution unique. It is one of the first studies to document the experiences of adolescents and methods of interventions in Chiredzi district, Masvingo Province in Zimbabwe.

Conclusion

In summary, many ALHIV default on treatment due to stigma and discrimination, coupled with accidental and late HIV status disclosures. Adolescents reported difficulties in disclosing their status to their peers, especially to potential and romantic partners. This mostly resulted in risky sexual behaviours compounded by lack of proper knowledge on sexuality and HIV and AIDS. Evidence from this study supports the view that offering all forms of social support, counselling and HIV education is important to minimising stigma and discrimination in communities as reported by adolescents. In addition, cash flows can help build the resilience of adolescents by providing financial leverage, which enables them to travel to hospitals for regular medical check-up and other HIV services, including social support. It can be concluded that to meet the 2030 global targets set by UNAIDS by at least 75 per cent, a holistic biomedical intervention must be implemented at both community and society level. Further, there is a need to prioritise ALHIV when enacting laws and formulating youth-friendly policies.

Notes

¹ Defined by WHO (2018) as the second decade of life (aged 10–19) with 'young adolescents' as 10–15-year-old individuals and older adolescents as 15–19-year-old individuals.

² 'Hit and run' refers to once-off romantic sexual relations without any meaningful ties, also known as one-night stands.

ORCID iDs

Christopher Jimu – <https://orcid.org/0000-0001-9162-1934>
 Kaymarlin Govender – <https://orcid.org/0000-0002-9586-1510>
 Roselyn Kanyemba – <https://orcid.org/0000-0002-5186-3960>
 Marie-Jeanne Offosse Ngbesso – <https://orcid.org/0000-0002-7920-9135>

References

- Agnew-Brune, C. B., Balaji, A. B., Mustanski, B., Newcomb, M. E., Prachand, N., Braunstein, S. L., Brady, K. A., Hoots, B. E., Smith, J. S., Paz-Bailey, G., & Broz, D. (2019). Mental health, social support, and HIV-related sexual risk behaviors among HIV-negative adolescent sexual minority males: three U.S. cities, 2015. *AIDS and Behavior*, 23(12), 3419–3426. <https://doi.org/10.1007/s10461-019-02525-5>
- Ankunda, R., Atuyambe, L. M., & Kiwanuka, N. (2016). Sexual risk-related behaviour among youth living with HIV in central Uganda: implications for HIV prevention. *The Pan African Medical Journal*, 24, 49. <https://doi.org/10.11604/pamj.2016.24.49.6633>
- Armstrong, A., Nagata, J. M., Vicari, M., Irvine, C., Cluver, L., Sohn, A. H., Ferguson, G., Caswel, G., Njenga, L.W., Oliveras, C., Ross, D., Puthanakit, T., Baggaley, R., & Penazzato, M. (2018). A global research agenda for adolescents living with HIV. *Journal of Acquired Immune Deficiency Syndromes*, 78(1), S16–S21. <https://doi.org/10.1097/QAI.0000000000001744>
- Ashaba, S., Cooper-Vince, C., Vořechovská, D., Maling, S., Rukundo, G. Z., Akena, D., & Tsai, A. C. (2018). Development and validation of a 20-item screening scale to detect major depressive disorder among adolescents with HIV in rural Uganda: A mixed-methods study. *SSM – Population Health*, 7, 100332. <https://doi.org/10.1016/j.ssmph.2018.100332>
- Bekker, L. G., & Hosek, S. (2015). HIV and adolescents: focus on young key populations. *Journal of the International AIDS Society*, 18(2), 20076. <https://doi.org/10.7448/IAS.18.2.20076>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Chibanda, D., Weiss, H. A., Verhey, R., Simms, V., Munjoma, R., Rusakaniko, S., Chingona, A., Munetsi, E., Bere, T., Manda, E., Abas, M., & Araya, R. (2016). Effect of a primary care-based psychological intervention on symptoms of common mental disorders in Zimbabwe: A randomized clinical trial. *Jama*, 316, 2618–2626. <https://doi.org/10.1001/jama.2016.19102>
- Chibanda, D., Cowan, F., Verhey, R., Machando, D., Abas, M., & Lund, C. (2017). Lay health workers' experience of delivering a problem solving therapy intervention for common mental disorders among people living with HIV: A Qualitative Study from Zimbabwe. *Community Mental Health Journal*, 53(2), 143–153. <https://doi.org/10.1007/s10597-016-0018-2>
- Curran, K., Ngure, K., Shell-Duncan, B., Vusha, S., Mugo, N. R., Heffron, R., Celum, C., & Baeten, J. M. (2014). 'If I am given antiretrovirals I will think I am nearing the grave': Kenyan HIV serodiscordant couples' attitudes regarding early initiation of antiretroviral therapy. *AIDS (London, England)*, 28(2), 227–233. <https://doi.org/10.1097/QAD.0000000000000025>
- Engel, G. (1980). The clinical application of the biopsychosocial model. *American Journal of Psychiatry*, 137(5), 535–544. <https://doi.org/10.1176/ajp.137.5.535>
- Feyissa, G. T., Woldie, M., Munn, Z., & Lockwood, C. (2019). Exploration of facilitators and barriers to the implementation of a guideline to reduce HIV-related stigma and discrimination in the Ethiopian healthcare settings. *PLoS One*, 14, e0216887. <https://doi.org/10.1371/journal.pone.0216887>
- George, M. S., & Lambert, H. (2015). 'I am doing fine only because I have not told anyone': the necessity of concealment in the lives of people living with HIV in India. *Culture, Health & Sexuality*, 17(8), 933–946. <https://doi.org/10.1080/13691058.2015.1009947>
- Harding, J. (2013). *Qualitative data analysis from start to finish*. London: Sage.
- Hayfron-Benjamin A, Obiri-Yeboah., D, Ayisi-Addo S., Siakwa P. M & Mupepi S. (2018) . HIV diagnosis disclosure to infected children and adolescents; challenges of family caregivers in the Central Region of Ghana *BMC Pediatrics*, 18, 365 <https://doi.org/10.1186/s12887-018-1330-5>
- Hosek, S. G., Harper, G. W., & Domanico, R. (2000). Psychological and social difficulties of adolescents living with HIV: A qualitative analysis. *Journal of Sex Education and Therapy*, 25(4), 269–276. <https://doi.org/10.1080/01614576.2000.11074360>
- Kar, S. K., Choudhury, A., & Singh, A. P. (2015). Understanding normal development of adolescent sexuality: A bumpy ride. *Journal of Human Reproductive Sciences*, 8(2), 70–74. <https://doi.org/10.4103/0974-1208.158594>
- Kidia, K. K., Mupambireyi., Z, Cluver L.D, Ndhlovu, C. E., Borok M and Ferrand R.A (2014). HIV status disclosure to perinatally infected adolescents in Zimbabwe: A qualitative study of adolescent and healthcare worker perspectives. *PLoS One*, 9(1), e87322. <https://doi.org/10.1371/journal.pone.0087322>
- Kimera, E., Vindevogel, S., Rubaihayo, J., Reynaert, D., De Maeyer, J., Engelen, A-M. & Bilsen, J. (2019). Youth living with HIV/AIDS in secondary schools: perspectives of peer educators and patron teachers in Western Uganda on stressors and supports, *SAHARA-J: Journal of Social Aspects of HIV/AIDS*, 16(1), 51–61. <https://doi.org/10.1080/17290376.2019.1626760>
- Li, R. J., Jaspán, H. B., O'Brien, V., Rabie, H., Cotton, M. F., & Nattrass, N. (2010). Positive futures: a qualitative study on the needs of adolescents on antiretroviral therapy in South Africa. *AIDS Care*, 22(6), 751–758. <https://doi.org/10.1080/09540120903431363>
- Lorenzetti, L. M. J., Leatherman, S. & Flax, V. L. (2017). Evaluating the effect of integrated microfinance and health interventions: An updated review of the evidence. *Health Policy and Planning*, 32, 732–756. <https://doi.org/10.1093/heapol/czw170>
- Machado, D. M., Galano, E., de Menezes Succi, R. C., Vieira, C. M., & Turato, E. R. (2016). Adolescents growing with hiv/aids: experiences of the transition from pediatrics to adult care. *Brazilian Journal of Infectious Diseases*, 20(3), 229–234. <https://doi.org/10.1016/j.bjid.2015.12.009>
- Mafirakureva, G. (2019). Parly committees probe Chiredzi child prostitution. *Newsday*, 18 April <https://www.newsday.co.zw/2019/04/parly-committees-probe-chiredzi-child-prostitution/>
- Mavhu, W., Willis, N., Mufuka, J., Bernays, S., Tshuma, M., Mangenah, C., Maheswaran, H., Mangezi, W., Apollo, T., Araya, R., Weiss, H. A., & Cowan, F. M. (2020). Effect of a differentiated service delivery model on virological failure in adolescents with HIV in Zimbabwe (Zvandiri): a cluster-randomised controlled trial. *The Lancet Global Health*, 8(2), e264–e275. [https://doi.org/10.1016/S2214-109X\(19\)30526-1](https://doi.org/10.1016/S2214-109X(19)30526-1)
- Mavhu, W., Willis, N., Mufuka, J., Mangenah, C., Mvududu, K., Bernays, S., Mangezi, W., Apollo, T., Araya, R., Weiss, H. A., & Cowan, F. M. (2017). Evaluating a multi-component, community-based program to improve adherence and retention in care among adolescents living with HIV in Zimbabwe: study protocol for a cluster randomized controlled trial. *Trials*, 18(1), 478. <https://doi.org/10.1186/s13063-017-2198-7>
- Mburu, G., Ram, M., Oxenham, D., Haamujompa, C., Iorpenda, K., & Ferguson, L. (2014). Responding to adolescents living with HIV in Zambia: A social-ecological approach. *Children and Youth Services Review*, 45(C), 9–17. <https://doi.org/10.1016/j.childyouth.2014.03.033>
- Neuman, W. L. (2014). *Social research methods: Qualitative and quantitative approaches*. (7th edn). Pearson

- Nyambuya, V. P., Nyamaruze, P., Dube M., & Shumba, K. (2021). Rethinking education in the age of 'social distancing': a qualitative inquiry on University of KwaZulu-Natal students' responses to online learning in the context of COVID-19. *Journal of African Education*, 2, 107–126. <https://doi.org/10.31920/2633-2930/2021/v2n1a5>
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd edn). Sage.
- Pega, F., Liu, S. Y., Walter, S., Pabayo, R., Saith, R., & Lhachimi, S. K. (2017). Unconditional cash transfers for reducing poverty and vulnerabilities: Effect on use of health services and health outcomes in low- and middle-income countries. *Cochrane Database of Systematic Reviews*, 11, CD011135. <https://doi.org/10.1002/14651858.CD011135.pub2>
- Petersen, I., Bhana, A., Myeza, N., Alicea, S., John, S., Holst, H., McKay, M., & Mellins, C. (2010). Psychosocial challenges and protective influences for socio-emotional coping of HIV+ adolescents in South Africa: a qualitative investigation. *AIDS Care*, 22(8), 970–978. <https://doi.org/10.1080/09540121003623693>
- Phillips, H. (2019). Micro-level mapping in Zimbabwe identifies key HIV hotspots. *Avert*, 9 January. <https://www.avert.org/news/micro-level-mapping-zimbabwe-identifies-key-hiv-hotspots>
- Ramaiya, M. K., Sullivan, K. A., O'Donnell, K., Cunningham, C. K., Shayo, A. M., Mmbaga, B. T., & Dow, D. E. (2016). A qualitative exploration of the mental health and psychosocial contexts of HIV-positive adolescents in Tanzania. *PLoS One*, 11(11), e0165936. <https://doi.org/10.1371/journal.pone.0165936>
- Russell, S., Seeley, J., Ezati, E., Wamai, N., Were, W., & Bunnell, R. (2007). Coming back from the dead: living with HIV as a chronic condition in rural Africa. *Health Policy and Planning*, 22(5), 344–347. <https://doi.org/10.1093/heapol/czm023>
- Sandy, P. T., Vhembo, T., & Molotsi, T. K. (2019). Sexual behaviour among adolescents living with the human immunodeficiency virus in Zimbabwe: educational implications. *African Journal of AIDS Research*, 18(2), 130–137. <https://doi.org/10.2989/16085906.2019.1621910>
- Slogrove, A. L., Mahy, M., Armstrong, A., & Davies, M.-A. (2017). Living and dying to be counted: What we know about the epidemiology of the global adolescent HIV epidemic. *Journal of the International AIDS Society*, 20(S3), 21520. <https://doi.org/10.7448/IAS.20.4.21520>
- Telsinghe, L., Charalambous, S., Topp, S. M., Herce, M. E., Hoffmann, C. J., Barron, P., Schouten, E. J., Jahn, A., Zachariah, R., Harries, A. D., Beyrer, C., & Amon, J. J. (2016). HIV and tuberculosis in prisons in sub-Saharan Africa. *Lancet (London, England)*, 388(10050), 1215–1227. [https://doi.org/10.1016/S0140-6736\(16\)30578-5](https://doi.org/10.1016/S0140-6736(16)30578-5)
- Toska, E., Cluver, L. D., Hodes, R., & Kidia, K. K. (2015). Sex and secrecy: How HIV-status disclosure affects safe sex among HIV-positive adolescents. *AIDS Care*, 27, 47–58. <https://doi.org/10.1080/09540121.2015.1071775>
- Toth, G., Mburu, G., Tuot, S., Khol, V., Ngin, C., Chhoun, P., & Yi, S. (2018). Social-support needs among adolescents living with HIV in transition from pediatric to adult care in Cambodia: findings from a cross-sectional study. *AIDS Research and Therapy*, 15, 8. <https://doi.org/10.1186/s12981-018-0195-x>
- UNAIDS. (2012). *Results – World AIDS Day Report 2012*. Joint United Nations Programme on HIV and AIDS. https://www.unaids.org/en/resources/documents/2012/20121120a_JC2434_WorldAIDSday_results
- UNAIDS. (2017). *Ending AIDS: Progress towards the 90-90-90 targets*. Joint United Nations Programme on HIV and AIDS. https://www.unaids.org/en/resources/documents/2017/20170720_Global_AIDS_update_2017
- UNAIDS. (2018a). *UNAIDS Data 2018*. Joint United Nations Programme on HIV and AIDS. <https://www.unaids.org/en/resources/documents/2018/unaids-data-2018>
- UNAIDS. (2018b). *Social protection: A fast-track commitment to end AIDS – Guidance for policy-makers, and people living with, at risk of or affected by HIV*. Joint United Nations Programme on HIV and AIDS. <https://www.unaids.org/en/resources/documents/2018/social-protection-fast-track-commitment-end-aids>
- UNAIDS. (2019). *AIDS info*. <http://rsta.unaids.org/publications/global-publications/2019/item/208-unaids-data-2019>
- UNAIDS. (2020). *AIDS 2020*. <https://aids2020.unaids.org/report>
- UNESCO. (2016). *Fulfilling our promise to young people Today: 2013-2015 Progress Review*. UNESCO, UNFPA and UNAIDS. https://hivhealthclearinghouse.unesco.org/sites/default/files/resources/fulfilling_our_promise_to_young_people_today_esa_2013-2015_progress_review_en.pdf
- UNICEF. (2015). Adolescent deaths from AIDS tripled since 2000 [Press release]. UNICEF. <https://www.unicef.ie/2015/11/27/adolescent-deaths>
- UNICEF. (2018). *Annual report 2018: For every child, every right*. <https://www.unicef.org/reports/annual-report-2018>
- van Zantvliet, P.I., Ivanova, K., & Verbakel, E. (2020). Adolescents' involvement in romantic relationships and problem behavior: The moderating effect of peer norms. *Youth & Society*, 52, 574–591. <https://doi.org/10.1177/0044118X17753643>
- Verhey, R., Chibanda, D., Vera, A., Manda, E., Brakarsh, J., & Seedat, S. (2020). Perceptions of HIV-related trauma in people living with HIV in Zimbabwe's Friendship Bench Programme: A qualitative analysis of counselors' and clients' experiences. *Transcultural Psychiatry*, 57(1), 161–172. <https://doi.org/10.1177/1363461519850337>
- Willis, N., Milanzi, A., Mawodzeke, M., Dziwa, C., Armstrong, A., Yekeye, I., Mtshali, P., & James, V. (2019). Effectiveness of community adolescent treatment supporters (CATS) interventions in improving linkage and retention in care, adherence to ART and psychosocial well-being: a randomised trial among adolescents living with HIV in rural Zimbabwe. *BMC Public Health*, 19(1), 117. <https://doi.org/10.1186/s12889-019-6447-4>
- World Health Organization (WHO). (2018). *Guidance on ethical considerations in planning and reviewing research studies on sexual and reproductive health in adolescents*. World Health Organisation.
- World Health Organization (WHO). (2019). *Providing peer support for adolescents and young people living with HIV* [Policy brief]. <https://www.who.int/publications/i/item/WHO-CDS-HIV-19.27>
- Zgambo, M., Kalembo, F. W., & Mbakaya, B. C. (2018). Risky behaviours and their correlates among adolescents living with HIV in sub-Saharan Africa: a systematic review. *Reproductive health*, 15(1), 180. <https://doi.org/10.1186/s12978-018-0614-4>
- Zimbabwe HIV Estimates Report*. (2018). National AIDS Council (NAC): AIDS & TB programme, Ministry of Health and Child Care. <http://nac.org.zw/wp-content/uploads/2019/01/Zimbabwe-HIV-Estimates-Report-2018.pdf>
- Zimbabwe Population-Based HIV Impact Assessment (ZIMPHIA). (2015). *Summary sheet*. http://phia.icap.columbia.edu/wp-content/uploads/2016/11/Zimbabwe-Factsheet.FIN_.pdf