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Traditional and biomedical health practices of adolescent boys and young men living with perinatally-acquired HIV in the Eastern Cape Province of South Africa

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Abstract

Men are less vulnerable to HIV acquisition than women, but have poorer HIV-related health outcomes. They access HIV services less, and are more likely to die on antiretroviral therapy. The adolescent epidemic presents further challenges, and AIDS-related illness is the leading cause of death among adolescents in sub-Saharan Africa. We explored the health practices of adolescent boys and young men (aged 13–22) living with perinatally-acquired HIV and the processes through which these practices are formed and sustained. We engaged health-focused life history narratives (n=35), semi-structured interviews (n=32) and analysis of health facility files (n=41), alongside semi-structured interviews with traditional and biomedical health practitioners (n=14) in the Eastern Cape, South Africa. Participants did not access traditional products and services for HIV, a finding that deviates from much of the literature. Findings suggest that health practices are mediated not only by gender and culture, but also childhood experiences of growing up deeply embedded in the biomedical health system.

Keywords

Adolescence; HIV; masculinity; medical pluralism; traditional health practices; South Africa; life course

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Declaration of interest statement

The authors report there are no competing interests to declare.

Introduction

The HIV epidemic is gendered. Women and girls are more likely to contract HIV, while men are less likely to adhere to anti-retroviral therapy (ART), be retained in the HIV cascade of care and are more likely to die of AIDS-related illness (Cornell, McIntyre, & Myer, 2011). The need to better engage men and boys in HIV prevention and treatment is increasingly acknowledged (Colvin, 2019).

Adolescents living with perinatally-acquired HIV in South Africa are among the first generation to grow up with access to life-sustaining ART (Burton, Giddy, & Stinson, 2015). Despite this progress, they experience significant challenges with ART adherence and retention in the HIV cascade of care (Haghighat, Toska, Bungane, & Cluver, 2021; Hudelson & Cluver, 2015). AIDS-related illness is the leading cause of death amongst adolescents in the region (WHO, 2015).

Despite documented poor HIV-related health outcomes amongst adolescents and men, little is known about the health practices, needs and challenges of adolescent boys and young men living with HIV.

Two recent adolescent studies support such exploration. In South Africa, Brittain and colleagues (2017) found that elevated viral load was associated with being male and older. A study in Zambia (Denison et al., 2018) found that being male was associated with incomplete adherence, and that males were almost double as likely to report missing two or more days of ART than females. This paper responds to this evidence gap by exploring and documenting the health beliefs and practices of adolescent boys and young men living with perinatally-acquired HIV.

The use of both traditional and biomedical products and services (medical pluralism) in South Africa is well-documented. Traditional health practitioners (THPs) are regularly engaged by adults living with HIV (Moshabela, Zuma, & Gaede, 2016; Peltzer, Friend-du Preez, Ramlagan, Fomundam, & Anderson, 2010), including for the treatment of HIV-related symptoms (Audet, Ngobeni, & Wagner, 2017; Puoane, Hughes, Uwimana, Johnson, & Folk, 2012), ART side-effects and opportunistic infections (Moshabela, Pronyk, Williams, Schneider, & Lurie, 2011). The simultaneous use of traditional medicines and ART for people living with HIV has been reported in a number of studies (Katz et al., 2015; Malangu, 2008). It is common for adults, and especially men, to take traditional medicines including instead of, or prior to, biomedical HIV care and treatment (Nattrass, 2005; Zuma, Wight, Rochat, & Moshabela, 2018). Men in particular may access traditional health services for reasons of privacy and respect (Zuma et al., 2018), and a construction of illness that does not place accountability and blame on them (Simwaka, Peltzer, Maluwa-banda, & Maluwa-banda, 2007; Jo Wreford & Esser, 2008).

Medical pluralism is driven by dissatisfaction with the biomedical health system, as well as socio-cultural beliefs and cosmologies of health and wellness related to ancestry, kinship and problems of a supernatural origin (Sobiecki, 2014; J Wreford, 2008). The success of the HIV response requires greater consideration of medical pluralism (Leclerc-Madlala, Green, & Hallin, 2016), and this is especially true for men (Colvin, 2019).

The aim of this study was to explore and document the practices of health service engagement of adolescent boys and young men living with perinatally-acquired HIV, and the processes through which these practices are formed and sustained.

Methods

Data were collected from adolescent boys and young men living with perinatally-acquired HIV (n=35, aged 13–22) in rural, urban, and peri-urban areas in the Buffalo City Metropolitan Municipality and Amathole District in the Eastern Cape Province in 2016–2018.

When HIV prevention and treatment medicines became available, the South African government questioned their efficacy and safety, refusing to make them accessible until forced by a constitutional court ruling in 2002. The roll-out of ART was then slow and uneven, and the Eastern Cape in particular lagged behind due to limited provincial infrastructure and resources. This delayed implementation resulted in an estimated 330,000 deaths, and the widespread and avoidable transmission of HIV to an estimated 35,000 babies (Chigwedere, Seage, Gruskin, Tun-Hou, & Essex, 2008). Participants in this study were born between 1995 and 2004, and acquired HIV perinatally. The adult HIV prevalence in the Eastern Cape is 25.2% (Statistics South Africa, 2016). More recent data on HIV prevalence is not available (Statistics South, 2021).

Adolescent participants identified as boys and men, had initiated onto ART, and grew up within isiXhosa-speaking households. Although perinatal acquisition is difficult to ascertain with certainty, participants had all tested HIV-positive and initiated onto ART as children. Most of their clinic files and interviews documented parental HIV and/or orphanhood.

This research was conducted as part of a mixed-methods longitudinal, community-traced study of adolescents living with HIV (n=1,059) (Cluver et al., 2016; Rebecca Hodes, Cluver, Toska, & Vale, 2018). The team of researchers who were responsible for the study's three waves of quantitative data collection recommended participants with whom they had built rapport. Participants were recruited with attention to location (a mix of urban, rural and peri-urban), circumcision status and age. Recommended participants were contacted telephonically to be asked if they would be interested in participating. In the case of participants under the age of 18, their caregivers were contacted first to explain the purpose of the study and ascertain if the caregiver would allow for their participation. For those who answered affirmatively, a time and place for the interview was set. In cases where the participant could not be reached telephonically, they were visited at home to ascertain their interest and set a time and location for the interview. Special attention was given to ensure that participants were not recruited during stressful periods (for example, exam times).

Art-based life history narrative interviews (n=35) were conducted to explore participant life and health histories, followed by in-depth, semi-structured interviews (n=32) to elicit information about masculinity and biomedical and traditional health-seeking across the life course. For those who attended ulwaluko (traditional initiation/circumcision) during the study period (n=5), additional interviews were conducted before and after to understand

their health practices during this period. Health facility files (n=41 files, 30 participants) were analysed alongside interview data with attention to recorded participant health and life events, health practices and HIV-related health outcomes (e.g. viral load, opportunistic infections). Data collection methods are reported on in detail elsewhere (Gittings, Colvin, & Hodes, 2022). Interviews were conducted by two researchers, recruited with attention to criteria proscribed by the study team, including: young, fluency in local languages (isiXhosa-speaking), experience working with young people and adult men within the study context (i.e. they had attended ulwaluko). A detailed account of the recruitment requirements and process, skills, practices and intersubjective identities of the research team is documented elsewhere (Gittings, Hodes, Colvin, & Zungu, 2020).

Interviews were audio-recorded, translated into English, and transcribed. In-depth semi-structured interviews were conducted with traditional and biomedical health workers (n=14) by the lead author. Of these, three participants were biomedical health workers, two practiced as both traditional and biomedical health workers, and nine were traditional health practitioners. Recruited participants were working in the provision of traditional and/or biomedical health services in the Eastern Cape Province. Convenience sampling was used, with attention to health workers who provided services to young people. Braun and Clarke's (2006) approach to thematic analysis was engaged. Nvivo software was used to assist in data management and analysis. Ethics approvals were provided by the University of Cape Town (HREC 314/2017) and the Eastern Cape Department of Health (EC_201709_13).

Participants over the age of 18 provided informed consent. Those under the age of 18 provided assent, and caregivers provided informed consent. Participants (adolescent boys and young men, as well as traditional and biomedical health providers) are referred to throughout this article using self-selected pseudonyms.

Conceptual and theoretical frameworks

Hegemonic masculinity is the dominant, idealised form of masculinity within a society (Connell, 2005), encompassing diverse behaviours and identities, produced contextually and relationally (Wetherell & Edley, 2014). In many settings – including South Africa – hegemonic forms of masculinity promote independence, strength, and restraint in displays of emotion or vulnerability which act as powerful barriers to managing health problems effectively (Courtenay, 2000). The concept of hegemonic masculinity has been applied to understand men's poorer HIV-related outcomes (Gibbs, Vaughan, & Aggleton, 2015).

Social theories of practice consider how participation in certain practices is recruited and sustained, rather than taking individual motivations as explanations for behaviours (Blue, Shove, Carmona, & Kelly, 2016). For example, medicine-taking or going to the clinic or THP are not single behaviours. Rather, they exist in the domains of human activity 'that are reproduced and transformed through the re-enactment and performance of specific social practices, coordinated and synchronised across space and time' (Ibid). The chances of someone becoming a practitioner of a certain health behaviour will depend on what the practice requires, available resources and their life history (Ibid). Social theories of practice can map out pathways to health, given that they provide a framework to understand how

‘specific practices do and do not ‘capture’ participation in light of unequal distribution of materials, competences and meanings that are required for participation’ (Ibid). A *life-course approach* – which suggests that one’s health at any given age reflects not only current conditions, but previous experiences and living circumstances and experiences (Kuh, Ben-Shlomo, Lynch, Hallqvist, & Power, 2003) – provides a long-term view of how these practices are formed, reproduced and performed. The construct of *embodiment* suggests that lived experiences, practices and contexts manifest in people’s physical bodies – that ‘our bodies tell stories about our existence’ (Krieger, 2005, p. 350).

That individuals understand and practice health in different ways has long been documented (e.g. (Janzen, 1978). *Medical pluralism* is a lens through which to consider how individuals enact health within a range of practices and systems. The term *traditional* as used in this article refers to traditional amaXhosa cosmologies of health and traditional health practitioners, products, and services. The term *biomedical* refers to public and private health system actors and structures, including products and services received through health facilities, and from people formally employed within the health system, including nurses and doctors.

Results

This section begins by describing participant biomedical health beliefs and practices, followed by traditional beliefs and practices. We describe how these shifted within each health system as participants moved from childhood into emerging adulthood. Participants were between the age of 13 and 22 at first interview. Further inclusion criteria are provided at Appendix 1 and demographic details at Appendix 2.

Biomedical health experiences and practices

Childhood experiences and biomedical care—Participants grew up thickly embedded in a set of biomedical practices and relationships, including pill-taking and frequent health facility visits, hospitalisation, and interactions with healthcare workers (HCWs). Interviews and health facility files documented how most learnt of their HIV status after becoming very sick, or when their parents died:

I was happy... I didn’t know my (HIV-positive) status... my father (also) had HIV and didn’t know up until his last days... I saw him getting sick in front of me ... and (then) they found out that I’m also positive.... My self-esteem was low... it showed in me I was very sick. I used to be big... All of my body was aching, I was going in and out of hospitals and my weight was thinner than now. It showed that there was something eating me inside.

(X-man, 22 years)

...in Grade 6. I was really sick and I did not finish that year at school... I did not know what happened I was told by my grandmother in the following year... that I am HIV positive... It did not sit in well with me, I was very upset... I was thinking was that I am going to die soon.

(Lullo, 22 years)

It was a difficult time... I was in and out of hospitals so there was no time to attend school... I used to have many different sicknesses, there was no diseases that were passing by me... I would be admitted to the hospital two to three weeks then I would come out again.

(Machete, 22 years)

Participant narratives and clinic files illustrated psychosocial challenges of fear and sadness, alongside experiencing sickness, missing school, moving between caregivers, being in the hospital, and of the routine exposure to biomedical products and services that kept them alive. As can be seen in the above quotes, learning of their HIV-positive status when they became very sick or experienced the death of a parent was dually difficult: they learnt they were living with a stigmatised, lifelong illness alongside an extreme physical or emotional hardship. These experiences of severe illness and death were challenging and disruptive formative life events. Many participants associated ART with these challenging events, and the possibility of dying themselves.

When I heard things about my mother and what was she like, sometimes when I take my pills I hate myself and ask myself “*why do I have to take these pills?*” and they say my mother transmitted it to me so I was infected. There were times when I wouldn’t take my pills for three months and did not go to hospital because of my anger... I would see many people, even from my family are healthy and I’m the only one who took these pills... Sometimes I would wish I was not taking them.

(Buja, 19 years)

The suggestion that memory and experience influence attitudes towards pills (R Hodes et al., 2019) is relevant here. Buja chose to not take HIV-medicine to distance himself from his HIV-positive status and what it represented in his life: his difference, the death of his mother, and his pain over his late disclosure. His pills became an outlet for this anger and grief. Similarly, other participants described negative impacts on their ART-taking and health after being told late of their HIV-positive status. They related their medicine to challenges surrounding their HIV-positive status such as parental loss, illness and the frustration and shame of living with a highly-stigmatised chronic condition. They described conflicted relationships with ART, speaking about their desire to be ‘normal’ and, in not taking pills, distancing themselves from their HIV-positive status. In not taking medicine, they attempted to reject or detach from what HIV represented in their lives.

I saw that my friends are laughing at me when I am taking my treatment and I thought *mxm voetsek (ugh, get lost/fuck off)* I must stop taking them for a while. So that’s how I ended being sick... that’s how I went to the hospital.

(Ngamla, 21 years)

I hate them sometimes but when I don’t take them I become weak. Then I take them again...

(Mr Shade, 17 years)

Nkweza I took them properly while I was 11 years but when I got to 17 I didn't take them... "yooooooooohhhhhh!!! Hayi [no] each and every day I have to swallow pills?..." ...

Interviewer Do you ever think of quitting them?

Nkweza Yes I do... [but] I may die. ...

Interviewer How often do you take them?

Nkweza ...occasionally... When I don't take them I'm alright but when I take them I become restless.

Interviewer What do you mean when you say you are alright...?

Nkweza You become normal, just like any other person.

(Nkweza, 18 years)

As participants became older, they would test the boundaries of their bodies, stopping pill-taking until health issues emerged and then re-starting. They discussed worrying about, or experiencing, illness after not taking pills for some time. They then re-started based on their desires to live and be healthy, demonstrating an awareness of the fatal consequences of long-term non-adherence. Their desire to be 'normal' and not take pills was at odds with the biological imperative once their HIV-positive status began to significantly affect their lives. The physical and psychological effects of ceasing pill-taking then influenced them to re-start, a cycle. From this process, participants gained embodied experiences of the efficacy of ART. Clinic files corroborated with these accounts, showing gaps in clinic attendance and ART adherence.

Masculinity and biomedical care—As participants became older, disengagement from biomedical treatment and care became increasingly pronounced. This was especially true during and after *ulwaluko* (traditional initiation/circumcision) where there are strong norms around not taking biomedicine (Gittings, Hodes, Colvin, Mbula, & Kom, 2021). Adolescent participants and HCWs in their interviews and clinic files suggested that adolescent boys and young men have difficulty with biomedical health seeking, describing them '*stubborn*', '*not serious*', not-accepting of an HIV-positive status and refusing to show sickness or pain. HCWs spoke about their observation that adolescent boys and young men access care only when problems become too pronounced to avoid:

They only come when they are very sick... They've been taught to endure... When they seek help... they can't endure it anymore.

(Sister Nceba, HCW)

Documented masculinity-related challenges present in participant narratives included hegemonic masculine norms that equate illness with weakness and emasculation (Colvin, 2019; Gibbs et al., 2015), institutional-level factors such as facility locations and operating hours (Dovel, Yeatman, Watkins, & Poulin, 2015), perceptions of public facilities as

‘women’s spaces’, and unfriendly and disrespectful staff (Colvin, 2019; Leichliter et al., 2011).

Participants also described being separated out on the basis of their HIV-positive status, shouted at and scolded. It is likely that such uncomfortable situations may affect adolescent boys differently than girls, with hegemonic masculine norms and power dynamics making adolescent boys and young men less resilient to these factors, and more likely to disengage from care as they become older.

Traditional health beliefs, experiences and practices

HIV-related beliefs: origins, acquisition and treatment—Findings from this study – triangulated across methods – suggest that participants did not access traditional products and services for HIV-related issues. All but one believed that HIV required biomedical treatment and care, and none reported believing that THPs could cure or treat HIV.

The below quote elucidates how participants delineated issues that require traditional and biomedical attention, and the belief that HIV is an issue that THPs cannot cure:

Interviewer Do (traditional healers)... have abilities or powers?

X-man Yes I can say so, because when you go to ixhwele (traditional herbalist) to check yourself when maybe you are not feeling well, or your child has become mentally ill... he will tell you “*it is this person who did this*” and “*here is the medicine to heal the person*” and then your child will be good and back to normal.

...

Interviewer Do they have any diseases that they can’t cure?

X-man HIV they can’t cure it at all.

(X-man, 22 years)

This interview reflects a common participant-held belief that traditional products and services could support certain aspects of well-being, but that HIV is treatable biomedically. Participants consistently demonstrated strong biomedical knowledge about HIV and its’ acquisition mechanisms. They were also aware of the potential adverse effects of mixing traditional and biomedicines.

With traditional healers you can’t mix the two medications, so what I prefer is to go to the clinic.

(Ta Saider, 21 years)

The ARVs must be separate from the ixhwele (traditional herbalist) medication.

(Nginduyi, 16 years)

... when I started to get sick (with HIV) I was told not to use traditional medicine... I do believe but I was told not to do it and if I’m being told not to use something then I don’t.

(X-man, 22 years)

Participants did not report mixing traditional medicines with ART or using traditional products or services for any HIV-related physical symptoms. This deviates from a literature that suggests that this is a common practice amongst adults living with HIV (Hughes et al., 2012; Peltzer et al., 2011), and that men may access traditional health services due to dissatisfaction within the biomedical system and for reasons of accessibility, privacy and an approach to service provision that does not blame them (Simwaka et al., 2007; Sobiecki, 2014; J Wreford, 2008; Jo Wreford & Esser, 2008; Zuma et al., 2018). Yet, a few recent studies have reported declines in traditional medicines-taking post initiation onto ART (Appelbaum Belisle et al., 2015; Zuma et al., 2018). Considering the recency of these studies alongside the findings presented above suggests either differences between people with perinatally-acquired HIV to those who acquire HIV later, a variety of practices amongst people living with HIV, and/or a change in previous years, perhaps due to increased biomedical information and the roll out of universal test and treat.

Despite strong biomedical HIV acquisition and treatment beliefs, understandings of the origins and underlying causes of HIV were varied, including that HIV was created by white people as a way to harm black people, Zimbabwean migration, that it came with soldiers or that it is a virus latent in everyone. Many said that they didn't know, suggesting that either that they had not been exposed to discourse about HIV's origins or internalised it as a belief, or that they did not want to elaborate on what they did believe. Some also suggested that HIV has supernatural roots:

HIV chosers certain people... I think it is related to ancestors... Maybe because it's been a while they left you with messages but you are ignoring them...

(Buja, 19 years)

... there is (God) and there is also witchcraft... Why do some people not get HIV? For example, I have HIV why don't they get it when they are helping me with my wound when they also have a wound?

(Soso, 21 years)

I was born HIV-positive, and some weren't. I think it is God's will.

(Dee, 19 years)

These quotes demonstrate some participants' beliefs that there is an underlying supernatural cause for HIV transmission such as violation of ancestral wishes, witchcraft or divine will.

Use of traditional health products and services—Despite the biomedicine-only approaches to HIV reported above, slightly more than half used traditional products and services for other reasons. They often distinguished between issues requiring biomedical care (such as HIV as seen above) and other forms of 'sickness', ill health and misfortune of a supernatural origin requiring traditional care:

I use them (traditional products and services) for dirty spirits, not for things like sicknesses.

(Akhona, 19 years)

...it depends on what your problem or your sickness is. If you are being followed by bad things... maybe that person has that problem which needs traditional medicine.

(Ta Saider, 21 years)

It was common for participants to believe that issues of pollution and bewitchment – often described as ‘*dirty spirits*’ or ‘*dirty things*’ – require traditional care. A core traditional health belief is that illness can be caused by violations of cultural taboos and witchcraft (Ngubane, 1977), which can manifest in physical or situational issues. For example, after being accused of rape, a participant was sent by his family to the THP to cleanse him from a curse so the court case would turn out favourably. Here they sought intervention in response to a supernatural issue (witchcraft) manifesting in the form of a rape accusation. In another case, a participant described seeing someone physically healed after evil spirits were cleansed from him. In both examples, traditional health services were sought to address the underlying supernatural issue, resulting in its’ physical/situational manifestations going away.

THPs and adolescent participants alike spoke of problems of a supernatural origin – including not having performed certain ceremonies, bewitchment, issues of discord between kin and *amafufunyana*¹ – for which caregivers bring adolescents for traditional services. Participants also accessed traditional care for protection, including before ulwaluko, which was the most common reason to access traditional services .

Ukuqinisa, meaning to ‘*strengthen*’ (Mlisa, 2009) or ‘*fortify*’, is a common protection practice. When performed on the body, it is often done by putting traditional medicine into small cuts in the skin, by steaming and bathing, or by wearing certain medicines or items: all of which were described by participants. For example, when asked if he ever used traditional products, a participant showed the researcher a rope he wore around his waist, describing that it protects him from evil spirits and supports his studies. Reports of ingesting traditional medicine were uncommon, which is notable given the documented risks of dehydration and vomiting up ART.

Decision-making and medical pluralism—How did participants determine whether to use traditional or biomedical care, or both? As put by one participant: ‘*It depends on the illness that you have.*’

The belief that some health issues are supernatural and require traditional products and services was common among participants, THPs, and some biomedical practitioners. It was generally understood that issues not manifest in the physical body, such as mental health, bad luck, bewitchment, family problems and issues with ancestors or evil spirits, required traditional care, and other issues such as HIV required biomedical care. This has been reported elsewhere amongst adults, with HIV, tuberculosis, diabetes, high blood pressure, stroke and arthritis often understood as requiring biomedical-only care (Zuma et al., 2018).

¹A form of mental disorder where the person is possessed by evil spirits as a means of sorcery (Mdleleni, 1990).

However, the distinction between types of care required was not always clear-cut, and this was especially true for some physical issues such as headaches, stomach problems, swollen legs and rashes. Participants would sometimes seek traditional and biomedical care complementarily for such issues: biomedical to support symptom management, and traditional to address the root cause. A THP illustrated this with an example of an infection caused by witchcraft: obtained from stepping on a sharp object. The supernatural issue was witchcraft, in which the person was set up to step on something, which in turn caused a physical issue, an infection.

When participants were uncertain about which health system to access, they took an elimination approach, where they first tried one, and if it did not work, the other. Most first sought biomedical care: *'I first go to the doctor... so that I can see whether the doctor's medication can help me or not...'* (Bele, 19 years). Similarly, THPs suggested that people will try different products and services, making decisions on where first to seek help based on their knowledge, access and needs:

...what the person wants is to get healed whether it is through the medical doctor or through the traditional healer... What makes a decision is what the person needs and the knowledge he has about those two.

(Tata Bongikhaya, THP)

Participants and their families engaged different health services as a process of trying things to see what works. In their experiences through such a trial-and-error approach, health beliefs and practices were also formed. For example, Ngamla (below) was given traditional medicine by his caregiver when he was younger. Not experiencing a change in health influenced him to stop using traditional products and services altogether.

Ngamla I used them (THPs) a lot when I was young, and now, yho (exclaims), I don't.

Interviewer Tell me what happened?

Ngamla It was my Mom. I don't know what they said I had back then, but I wanted to get better... The iGqirha (diviner) gave me some medicine. I kept drinking them up until I said "*Fok [fuck] off, there is nothing happening*". Now I don't want to see them.

(Ngamla, 21 years)

Similar to other participants, Ngamla's early life history and formative engagements within traditional and biomedical care shaped the uptake, reproduction and interruption of his health practices. When he was younger, caregiver beliefs and practices were central to his health practices. As he moved into older adolescence, he began to make autonomous decisions about health-seeking based on his own embodied experiences of what worked.

Traditional health practices and masculinity—As participants got older, they also engaged traditional health practices as a way to perform to hegemonic masculine norms such as strength, physical dominance, success in sport, material wealth, sexual performance and

‘luck’ with women and girls. THPs suggested that it is older boys who do these things. They contrasted this with accessing traditional health care for an underlying supernatural or familial issue, which would usually be done with family members:

Gogo Nosi ... they want to be noticed... that thing that says “*look at me, I’ve arrived...*” they will come alone.

Interviewer So they would never come alone for a physical issue?

Gogo Nosi No, they would drag a parent along.

(Gogo Nosi, THP)

for other (physical) sicknesses... at that early age... their parents would tell them “*no lets go to the sangoma*” [traditional health practitioner]... at that (older) age... it would be the issues of girls... (and) some have issues with their manhood... sexuality, you see?

(Tata Bongikhaya, THP)

See young boys will use sangomas [traditional health practitioner] for other things. “*...I want to be this inkunzi²...*” ‘*I want girls to like me...*’. ‘*We are fighting another village that side*’... Or they are playing a soccer match... or it can be for cows, for livestock, ‘*ok I want to protect my resources, my assets*’. So that is the magic. But when it is physical... because they are closer to their mothers because they are still adolescents, it’s the clinic. I don’t think a 16 year old will go by themselves for physical things... They don’t go to their parents and say they want to win this match, or to get girls. They will go behind their back.

(Luthando, THP)

Adolescent participants also described success in sport and being noticed as reasons they sought traditional health services alone, but did not speak about sexual performance and ‘luck’ with women. This may not a widespread practice, or, given the highly personal, and perhaps embarrassing nature of this claim, it is plausible that participants had did not feel comfortable sharing this experience.

THPs also suggested that the act of accessing traditional services may also serve as a performance to hegemonic masculine norms.

Those who are older... climbing the alpha-male ranking order.... when a boy starts becoming macho... If he can stomach it, when he gets there (to the THP) you can see he is manning up, he flexes. He says ‘*I need this thing, I want to get girls*’. The sangoma [traditional health practitioner] will play with (challenge) him and see... he will have to be standing (up to them)... His bravado wins the situation.

(Luthando, THP)

Above we document how participants engaged traditional products and services for a number of functions, but not HIV, for which they sought biomedical care only. Their

²A Mpondo term for a dominant masculinity, a bull.

younger engagements with traditional care were determined and overseen by caregivers. In older adolescence, some also began to seek traditional products and services alone to support hegemonic masculine performances, and as an enactment of adult masculinity itself.

Discussion

This study found that biomedical and traditional health practices were mediated by a variety of factors which shifted over the life course of adolescent boys growing up with perinatally-acquired HIV. As participants became older, both traditional and biomedical practices became an avenue to demonstrate autonomy and perform to, subvert and re-signify health-related hegemonic masculine norms. Participants tested biomedical information and adult authorities, defined their own belief systems, and made their own health practice decisions.

Masculinity also began to present a complication in relation to biomedicine, and participants started to experience well-documented deterrents to biomedical care faced by adult men living with HIV including stigma, scolding HCWs and gossip. Although these masculinity-related challenges aggravated their retention in the HIV cascade of care, participants continued to have clearly distinguished relationships with biomedical care and treatment for HIV, and biomedicine-only HIV-related practices. They also started to use traditional health products and services alone as a way to perform to hegemonic masculine norms. Disengaging from biomedical care and deciding to use traditional care had separate motivations, twin processes spurred by coming into adult manhood. Whereas traditional healing offered solutions to certain challenges of becoming a man, biomedicine complicated masculinity, but not in a way that was compensated by traditional medicine. This finding demonstrates how gender and age shape both traditional and biomedical health practices, yet such practices may not always be engaged in relation to one another. Although little is known about adolescent boys' experiences and performances within HIV care as they transition into adult manhood, a small evidence supports the suggestion that as adolescent boys become older they may face have poorer adherence than their younger, and female counterparts (Brittain et al., 2017; Denison et al., 2018).

The finding that participants did not report mixing traditional medicines with ART or using traditional products or services for any HIV-related physical symptoms, deviates from the a literature that suggests that this is a common practice amongst adults living with HIV (Hughes et al., 2012; Peltzer et al., 2011). Yet, a few recent studies have reported declines in traditional medicines-taking post initiation onto ART (Appelbaum Belisle et al., 2015; Zuma et al., 2018). Considering the recency of these studies alongside the findings presented above suggests either differences between people with perinatally-acquired HIV to those who acquire HIV later, a variety of practices amongst people living with HIV, and/or a change in previous years, perhaps due to increased biomedical information and the roll out of universal test and treat.

Findings also deviate from the suggestion that adult men living with HIV have a less clearly defined relationship with biomedical HIV care, and are more likely to use traditional products and services for HIV, regardless of whether they have also embraced biomedical

understandings. The literature suggests that men in particular may access traditional health services due to dissatisfaction within the biomedical system and for reasons of accessibility, privacy and an approach to service provision that does not blame them (Simwaka et al., 2007; Sobiecki, 2014; J Wreford, 2008; Jo Wreford & Esser, 2008; Zuma et al., 2018). Although practices change over time and are difficult to quantify, findings document this distinctive group's unique relationships to traditional and biomedical health systems, as compared to men who acquire HIV later in life.

Findings presented above document that many participants believed that HIV has supernatural origins, dovetailing with a literature that documents associations between HIV and supernatural issues (Ashforth, 2005; Jo Wreford & Esser, 2008). These findings align with traditional African aetiological explanations of illness which may incorporate biomedical understandings while drawing on traditional knowledge, culture and spiritual beliefs to look for 'ultimate' causes (Liddell, Barrett, & Bydowell, 2005; Jo Wreford & Esser, 2008). Good or ill health may be understood as related to interactions and relationships between nature, the cosmos, and between human beings, including ancestors (Gundidza & Kassilo, 2015). This traditional belief system differs from biomedicine in how it sees cause-and-effect, and conceptualises multiple, intersecting levels of well-being (Moshabela et al., 2016). This may explain how some participants, despite holding biomedical beliefs about HIV acquisition and treatment, possessed underlying supernatural beliefs about its' origins and ultimate reasons beneath HIV-acquisition. These alternative explanations of the origin of HIV, both spiritual and conspiracy-based, demonstrate the presence of multiple layers of knowledge and belief. Analysis of participants' views alongside a review of the literature reflect a complicated and uneven terrain of HIV-related belief and practice, underpinned by a variety of complex and multi-layered understandings of illness. Far from being a homogenous group, participants had many different ideas about where HIV comes from, although there was a general coherence in their biomedical knowledge and beliefs about HIV acquisition and treatment.

A theories of practice perspective, which suggests that the chances of someone becoming a practitioner of a certain health behaviour will depend on what the practice requires, available resources and life histories (Blue et al., 2016), is relevant here. Using a theories of practice lens, Skovdal and colleagues (2017) developed a model to understand health practices of people living with HIV in six sub-Saharan Africa countries. They found that interactions with HIV services were shaped by availability/absence of health services and medicine ('materialities'), knowledge of how to live with HIV ('competencies') and 'meanings' such as trust in HIV-related services, normalisation of HIV and HIV-related stigma (Ibid). Below we apply this model to understand the factors that have forged the unique relationship to biomedical and traditional health practices reported by adolescent boys and young men in this study.

First, materialities, such as access to paediatric HIV services, and competencies—namely, knowing about HIV-related products and services and how to navigate the biomedical health system shaped participant health practices. Having grown up living with HIV meant that they were deeply embedded in a set of HIV-related biomedical relationships, technologies and services over an extended period of time. Through this, they received information,

access and support to forge tools for health-seeking that those who did not grow up living with HIV do not have. Although women are generally more likely to have health-system competencies and access HIV-related services because of reproductive health services and child-care responsibilities, this was not true for participants in this study by nature of having survived into adolescence with HIV. In the quantitative arm, participants (regardless of gender) who were vertically infected had better retention and adherence outcomes than those who were horizontally infected, likely due to competencies and materialities from formative experiences with biomedical health services, and from shared experiences from caregivers or siblings affected by HIV (Sherr, Cluver, Toska, & He, 2018). Despite the substantial and clear disadvantages of growing up living with HIV, these early engagements with the health system may have also formed unique practices for HIV health-seeking that adult men might not have. Although masculinity-related issues began to aggravate participants' engagements in biomedical care as they became older, their distinctive life experiences may have made them more resilient to retention in care.

Second, formative childhood experiences of severe illness and recovery after initiating ART created trust in the efficacy of biomedicine, and in certain health providers and services ('meanings'). Such embodied knowledge of the efficacy of biomedicine for HIV-related issues, in turn shaped participant health beliefs and practices. These significant – and often multiple – exposures to the efficacy of ART has likely created this distinctive set of practices for adolescent boys, in contrast to men who become sick or test positive for HIV as adults. This finding aligns with the speculation that vertically HIV-acquired young people have developed skills from extended exposure to HIV care and treatment, including drug resistance, challenges to their care regimens, and more opportunities to respond to other challenges such as stigma (Sherr et al., 2018).

Third, their young age at diagnosis meant that they were subject to the decisions of adult caregivers, as opposed to older boys and men with a new diagnosis who have the authority to make their own decisions. Growing up being told by caregivers and health workers to take biomedicine, and feeling the pressure to please authorities may have created certain patterns of health practices. As they became older, although they may have chosen not to take their pills as a way to test authority and distance themselves from their HIV-positive status, they did not compensate with traditional medicine because of these early experiences and teachings. Adolescence is a time characterised by major physical, social and psychological challenges. Rapid brain development within a context of newly-developed autonomy, responsibility and decision-making, may result in heightened health risk-taking (Laurenzi et al., 2020; World Health Organization, 2017). Further, many of their caregivers have also had first-hand experience of living with, or caring for someone with HIV and witnessing the efficacy of ART. This likely supported the development of HIV competencies within the biomedical system, shaping caregiver HIV-related health practices.

Last, their young age when initiating into the HIV cascade of care meant that they did not experience the same masculinity-related deterrents that older men might, such as concerns over stigma, privacy and feeling humiliated and emasculated. Participants may have developed resilience while younger against such deterrents.

Applying Skovdal's model, additional 'meanings' of normalisation of HIV and HIV-related stigma were also present. These factors applied to participants as well as their caregivers on whom their health practices were often based. Family relationships and life stage also affected health practices. While HIV health service competencies increased as participants moved towards adulthood, meanings, including HIV stigma and normalisation, shifted in ways that posed challenges and issues of disengagement from biomedical treatment and care. Despite this, participants likely retained tools from their early experiences that men who acquire HIV later in life do not have.

Growing up with HIV and within the biomedical health system did not seem to shift belief systems in relation to traditional cosmologies of well-being, health and illness and many participants also held traditional beliefs and engaged with a variety of traditional products and services. As children, decisions around traditional health practitioners were directed by caregivers, and mostly accessed traditional products and services with family members. This aligns with the literature which documents how family, and especially elders, play a significant role in decisions to use traditional care (Zuma et al., 2018). Kinship relationships where family connections are rooted in an ancestor are central to traditional understandings of health and well-being (Gundidza & Kassilo, 2015), and families are often treated together by THPs.

Participants also held a variety of understandings and beliefs about the origins of and underlying meanings of HIV, despite a clearly articulated use of biomedicine for HIV and strong biomedical HIV-related knowledge. Although speculative, this finding suggests that although participants embraced a clear and distinct way of thinking about HIV treatment and care, their belief systems and their broader worldviews that include traditional healing continued to exist. Here too, a social process approach – which suggests that beliefs as well as health practices are underpinned by a variety of factors, including embodied and lived experiences, cultures and traditions – is relevant. Given materialities and competencies discussed above, HIV may have 'moved categories' from requiring traditional to biomedical treatment, but other types of illnesses or issues had not. Historical accounts have documented amaXhosa culture as dynamic (Soga, 1931), including in relation to the adaptability of medicine's place in cosmology (Mtuzze, 2003). Findings from this study affirm the syncretic nature of amaXhosa cosmology.

It is common for people to hold a variety of beliefs simultaneously and to enact them in complex and creative ways (Janzen, 1978). Health beliefs and practices are multi-layered, and traditional beliefs may differ from biomedical understandings in their conceptions of well-being and illness, cause and effect (Moshabela et al., 2016). The literature on adult medical pluralism in South Africa maps out how beliefs do not fit neatly into one system, and recognises the complex and non-linear relationship between practice-related beliefs and ultimate causes (Gundidza & Kassilo, 2015; Liddell et al., 2005; Jo Wreford & Esser, 2008). Findings from this study dovetail with these assertions, exploring and documenting some of these complexities of multiple systems of belief and practice for adolescent boys and young men living with perinatally-acquired HIV.

Limitations

By nature of having lived into their mid-to-late adolescence, it is possible that participants in this study are more likely to possess biomedical beliefs and practices than those who passed away because they did not access biomedical treatment, and were therefore not interviewed.

Further, given the size and nature of this study, it is not possible to definitively ascertain age and gender differences in engagement with biomedical care as we did not include adolescent girls and young women, or include a large sample of different age groups. However, the narratives of biomedical and traditional health providers, observations in clinic files, and discussions with adolescent boys and young men align with the literature on adult masculinity which suggests that men face significant challenges with pill-taking and attending health facility appointments (Cornell et al., 2010; Johnson et al., 2013). Considering how plural medical practices overlap or differ for horizontally HIV-infected adult men could provide better insight into men's health practices in the age of universal test and treat.

Conclusion

As adolescent boys living with perinatally-acquired HIV get older, they may face similar challenges around ART adherence and retention in care as men who were diagnosed with HIV at a later stage in their lives. Although such masculinity-related challenges may begin to aggravate engagements with biomedical care, this study found that participants did not compensate by engaging traditional health services.

Using a theories of practice perspective, we suggest a variety of reasons why adolescent boys and young men living with perinatally-acquired HIV have developed distinctive relationships to biomedical and traditional health practices, including not accessing traditional products and services for HIV. Their health practices are mediated by gender norms, age and also by childhood experiences of illness and growing up deeply embedded within a set of biomedical products and services. The significance of these suggestions and pathways towards such practices require further elucidation.

Findings from this study add to a literature that suggests that childhood experiences of disclosure of an HIV-positive status, childhood illness and orphanhood can have potential long-term implications for ART adherence. Initiatives to encourage timely, appropriate disclosure and adequate health and social system support to navigating illness and family trauma may support this.

This research also adds to the call for the development and implementation of health systems that better support men to engage with, and be retained in biomedical care. Further research and programming could explore which interventions support the needs of adolescent boys and young men, with attention to community, familial, health and social services that can support adolescent boys and young men as they transition into adulthood. Findings point to the value of consistent biomedical health system engagement over time, alongside clear and regular information about HIV medicines in developing HIV-related health competencies. Ensuring inclusive, welcoming and supportive health service environments for adult men

newly diagnosed with HIV may also shift HIV-related health competencies and practices towards improved clinic attendance and ART adherence.

In contrast to the suggestion that medical pluralism and traditional beliefs may harmful to HIV biomedical health practices, findings from this study document health affirming, contextually-grounded plural beliefs and practices for people living with HIV in biomedical care. The adolescent boys and young men in this study enacted plural beliefs and practices in ways that acknowledged the limitations and challenges of both biomedical and traditional health systems. Findings from this study also affirm the presence and importance of traditional beliefs and practices, making a case for their greater acknowledgement and collaboration within the biomedical system.

This work has shown the value of engaging traditional health practitioners in health and well-being related research and documented some of the rich breadth and variety of traditional health practitioner perspectives. The traditional health practitioners in this study possessed an intimate understanding of client beliefs and practices, and were well placed to provide patient support as they navigate complex and plural belief systems and health-related practices. Specifically, as people who have experience with, and a detailed understanding of male clients and the issues facing them, engaging traditional health practitioners on issues related to men and poor health outcomes merits further consideration. Such work should do more than mandate and train traditional health practitioners on referring men to clinic services. Active, meaningful engagement and the co-identification and implementation of solutions is warranted.

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Appendix 1: Inclusion criteria and sampling

Between the ages of 13 and 22 ³ .
Self-identified as male.
Selection was organised by circumcision status, given its centrality to identities and meanings of boyhood and manhood in the study site. The study included participants who were inkwenkwe (uncircumcised boys) as well as indoda (circumcised men), and interviewed some participants before and after ulwaluko.
Living with HIV, and initiated onto ART.
When possible, participants were recruited who researchers had observed to be willing and engaged participants. It is acknowledged that selecting participants who seemed to enjoy talking that this may have introduced bias into the selection of participations for this study, which is discussed further in the 'limitations' section.
Provided verbal and written informed and voluntary consent (18 or over), or if they were under the age of 18, provided verbal and written informed and voluntary assent alongside the verbal and written informed and voluntary consent of their legal guardian.

Appendix 2: Participant Table: Adolescent boys and young men

Pseudonym	Age at first interview	Location
Unathi*	16 years	BCM, urban
Ndoda	18 years	BCM, urban
Buja	19 years	BCM, urban
Khwezi*	20 years	BCM, urban
Layzdu	18 years	BCM, urban
Sakhiman	20 years	BCM, urban
Listar	18 years	Amathole, rural
Ngamla	21 years	Amathole, peri-urban
Machete	22 years	Amathole, peri-urban
Mluthwana	16 years	BCM, urban
Lullo	22 years	BCM, urban
Mayor	16 years	BCM, urban
Tonxo	22 years	Amathole, rural
Dee	19 years	Amathole, urban
Mr Shade	17 years	BCM, peri-urban
Ulwazi*	13 years	BCM, peri-urban
Jeveno	17 years	Amathole, peri-urban
Movite	18 years	BCM, urban
Ta Saider	21 years	Amathole, peri-urban
Nginduyi	16 years	Amathole, peri-urban
Sne	19 years	Amathole, rural
Nkweza	18 years	BCM, urban
Svij	25 years	BCM, urban

³This was participant age at first interview. There was one participant who was 25 at first interview, as his date of birth had been misrecorded in our initial roster.

Pseudonym	Age at first interview	Location
C' Vig	19 years	BCM, urban
Sividge	21 years	BCM, urban
Soso	21 years	Amathole, rural
Ndofaya	18 years	BCM, rural
Akhona*	19 years	BCM, urban
Ringo	17 years	BCM, urban
X-man	22 years	Amathole, peri-urban
Zube	17 years	BCM, urban
Luya	17 years	BCM, urban
Loza	21 years	BCM, peri-urban
Bele	19 years	BCM, urban
Stenza	13 years	Amathole, peri-urban

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