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"I told her this is your life": Relationship Dynamics, Partner Support, and Adherence to Antiretroviral Therapy among South African Couples

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Abstract

Despite the important role of social relationships on health and well-being, little is known about how primary partners affect adherence to HIV care and treatment. We qualitatively explored how relationship dynamics and partner support influence adherence among couples from KwaZulu-Natal, South Africa. Twenty-four heterosexual couples with at least one HIV-positive partner completed semi-structured interviews on topics including relationship dynamics (intimacy or emotional closeness, communication, violence), experiences with HIV care and treatment, and HIV-related social support. The majority of couples were seroconcordant HIV-positive (92%) and both on ART (63%). Participants described how primary partners both interfered with and supported adherence. Negative forms of influence included relationship conflict, which resulted in forgetfulness to take pills, and men's attempt to control use of ART. However, participants were more likely to highlight positive forms of influence on adherence, which included social support (instrumental, informational, and emotional support), intimacy, and commitment. The findings also suggest a reciprocal relationship between ART and relationships such that couple ART use may enhance relationship quality. Primary partners are important pillars of support for ART adherence, especially in contexts of high unemployment and poverty. Future interventions that encourage and leverage these supportive relationships could improve ART adherence among heterosexual couples in similar settings.

Keywords

relationship dynamics; social support; couples; antiretroviral therapy; South Africa

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Introduction

South Africa's antiretroviral therapy (ART) programme is one of the largest in the world, with an estimated 3.4 million people receiving treatment (UNAIDS 2016). High levels of adherence to ART are needed to prevent virologic failure, the development and spread of drug-resistant strains of HIV, and to achieve viral suppression (Simoni et al. 2006), which is necessary to prevent the spread of HIV to uninfected partners (Rodger et al. 2014). However, in sub-Saharan Africa, adherence is suboptimal with estimates of 72.9% (Heestermans et al. 2016). Greater attention to adherence is critical given the shift towards a 'test and treat' approach (WHO 2015)—which will dramatically increase the number of individuals on ART.

In sub-Saharan Africa, barriers to adherence exist at multiple levels of the social ecological model (Brofenbrenner 1979, Layer et al. 2014). At the structural level, widely cited barriers —often related to economics—include food insecurity, travel distances and costs, and healthcare-related factors such as long waiting times (Kagee et al. 2011, Weiser et al. 2014, Hardon et al. 2007, Lankowski et al. 2014). At the interpersonal level, quantitative studies show that HIV-positive women who fear being stigmatised and experience intimate partner violence (IPV) are less likely to adhere to treatment (Hatcher et al. 2015, Hampanda 2016, Nachega et al. 2004). This is supported by qualitative studies showing that fears around IPV limit partner disclosure, and that disclosure can trigger new incidents of violence (Colombini, James, and Ndwiga 2016, Mulrenan et al. 2015). At the individual level, psychosocial and behavioral factors such as negative beliefs about HIV treatment, alcohol use, and depression have been associated with suboptimal adherence (Kagee et al. 2011, Nozaki et al. 2013, Nakimuli-Mpungu et al. 2012, Dahab et al. 2008, Heestermans et al. 2016).

Social relationships can buffer the social and economic obstacles associated with HIV care and treatment through the provision of social support (Ware et al. 2009, Nachega et al. 2006, Watt et al. 2009). Social support typically consists of three forms: emotional support (e.g., care, love), informational support (e.g., guidance, advice), and instrumental support (e.g., tangible aid and services) (Heaney and Israel 2008). Studies from sub-Saharan Africa have identified that emotional and instrumental support are key facilitators of adherence (Dahab et al. 2008, Hardon et al. 2007, Ware et al. 2009). While support can come from multiple sources, primary partners play a central role in the provision of HIV-related social support, above and beyond other types of relationships (Wrubel, Stumbo, and Johnson 2008, 2010, Hamilton, Razzano, and Martin 2007) and this holds true across settings (Leddy et al. 2015, Darbes and Lewis 2006, Fergus et al. 2008, Conroy et al. 2017).

Social support is one of many ways that primary relationships can affect health behaviors (Heaney and Israel 2008). According to the dyadic interdependence model (Lewis et al. 2006), relationship dynamics such as intimacy (i.e., feelings of closeness to a partner), satisfaction, and commitment encourage a transformation in motivation from one that is primarily self-centered to one that is more pro-relationship—allowing couples to work collaboratively towards a particular health threat (like HIV). As such, positive relationship dynamics (e.g., intimacy, trust) enhance couples' capacity for successful coordination of

health behaviors, while negative relationship dynamics (e.g., IPV) make it difficult for couples to work together. In South Africa and Malawi, relationship dynamics such as commitment, unity, equality, trust, and communication have been linked to increased HIV testing and disclosure in couples (Darbes, Dladla, and Mogale 2006, Conroy 2014a, b, van Rooyen et al. 2014, Conroy and Wong 2015). Less is known about the intersection between relationship dynamics and adherence in sub-Saharan Africa; however; evidence from resource-rich settings suggests that higher relationship quality is positively associated with ART adherence and virologic control (Knowlton et al. 2011, Johnson et al. 2012). On the other hand, negative aspects of relationships such as IPV have been associated with lower ART use, lower adherence, and incomplete viral suppression (Hatcher et al. 2015).

Despite the prominent role of primary partners for health and everyday life in sub-Saharan Africa, few studies have conducted an in-depth examination of how relationships affect adherence to HIV care and treatment. Specifically, limited research has examined these dynamics through both partners' accounts—which can offer depth and richness to individuals' narratives. In the current study, we qualitatively examined how relationships could interfere with or support adherence in a sample of couples affected by HIV from rural KwaZulu-Natal (KZN), South Africa.

Methods

Study Site

The current study is situated in Vulindlela, a rural community in KZN province in South Africa. Located approximately 150 km northwest of Durban and 25 km southwest of Pietermaritzberg (the provincial capital), the community has a population of around 150,000. The KZN province is characterised by high unemployment rates (39% among adults) and low per capita income levels with 30% of households making less than $1200 US dollars per year (Shisana et al. 2009). Poverty, the high price of *ilobolo* (brideprice), and other social factors have contributed to low marriage rates (Hosegood, McGrath, and Moultrie 2009), and the rise of cohabitating unions and other non-cohabitating partnerships.

Vulindlela is located in the epicentre of the HIV epidemic in South Africa. Data collected among pregnant women suggest that HIV prevalence in Vulindlela may be around 39% (Kharsany et al. 2015), which is higher than provincial estimates from KZN of 17% (Shisana et al. 2014). One of the main drivers of HIV infection is IPV (Jewkes et al. 2010). The prevalence of IPV in South Africa ranges from 30–55% (Dunkle et al. 2004, Abrahams et al. 2006). In KZN, 25% of women had experienced violence during pregnancy (Groves et al. 2011).

There are seven health centres in the Vulindlela community that deliver a package of essential health services including HIV testing and counselling (Kharsany et al. 2015). A typical clinic is staffed by 3–4 clinicians and serves 3,500 active ART patients, who travel an average of 4–5 km to reach the clinic (personal communication with clinic staff, October 2014). At the time of this study, most HIV patients were required to identify a "treatment buddy" such as a family member to co-attend treatment literacy classes and provide support (National Department of Health 2010).

Sample and Recruitment

We conducted in-depth interviews with 24 couples (48 individuals) between November 2014 and May 2015. To be eligible, couples met the following criteria: (1) aged 18 or older; (2) had no reports of severe violence in the past six months (to protect participants); (3) in a primary relationship with each other for at least one year; and (4) at least one HIV-positive partner (referred to as the "index patient" for clarity and brevity) who has disclosed their HIV status to their partner. Severe violence was defined as physical violence with the potential to cause injury (Ellsberg et al. 2001). Participants who answered 'yes' to statements such as, 'My partner kicked me, slammed me against a wall, punched me or hit me with something that could hurt', were ineligible. Few participants were excluded due to severe violence. If a participant indicated severe violence, interviewers were instructed to finish the screening process and then inform individuals they were ineligible using a generic statement.

The recruitment approach consisted of active and passive recruitment strategies. Index patients were recruited at HIV clinics in Vulindlela when they picked up medicines or attended appointments. For those not yet on ART, we placed fliers at clinics and asked staff to distribute information about the study. At the time of recruitment (e.g., when they arrived to collect medications), index patients were screened for eligibility, and if interested and eligible, could give an information card to their primary partners. Partners would then contact the study staff to undergo eligibility assessments. To capture a range of experiences, we used maximum variation sampling with quotas (Patton 2002) to sample index patients by length of time on ART (0 months, <6 months, 6–12 months, and >12 months) and gender. The target sample size of 24 couples was based on figures from similar qualitative research (Watt et al. 2009) and best practices for reaching data saturation (Guest, Bunce, and Johnson 2006).

Both partners provided written consent and were given with a small incentive of 100 ZAR (about $9 USD) for participation. Ethical approval was obtained from the Committee on Human Research at the University of California San Francisco and the Research Ethics Committee at Human Sciences Research Council (HSRC) in South Africa.

Data Collection

Gender-matched, trained research assistants conducted the interviews in the predominant language of *isi*Zulu. Partners were interviewed separately, but simultaneously, in private rooms of the HSRC research center. Interviews were conducted using a semi-structured interview guide with open-ended questions on relationship history (e.g., how the couple met); relationship dynamics (e.g., love and intimacy, trust, couple communication, conflict, IPV); experiences with HIV care and treatment; and partner support and influence on HIV care and treatment. For example, index patients were asked questions such as, 'What makes it easy or difficult for you to attend your clinic appointments? Does your partner or anyone else help you and how so?' For this topic, probes included 'Who takes care of your children while you attend your appointments? Who pays for your travel expenses?' Index patients were also asked, 'Tell me about some of the challenges you face with taking your ARVs. Can you tell me about a time you missed a pill or multiple pills in a row?', and 'Have any of

the relationship problems you mentioned earlier (e.g., violence, alcohol use) caused you to forget to take your medicine and what happened?' Partners were asked similar questions, but with regards to the index patient's experiences and how they supported or influenced their partner's treatment experiences.

Data Analysis

All interviews were audio recorded, translated from *isi*Zulu to English, transcribed word-for-word, and imported into the Dedoose® software package for analysis. To link partner data for the analysis, each couple was assigned a unique ID (e.g., CID015) and transcript files were named with this ID followed by an indicator for gender and partner type (e.g., CID015F_Index, CID015M_Partner). First, two researchers (AC, AL) reviewed each set of couple transcripts for content and created memos describing couple dynamics and relationship-level influences on adherence. Next, the two researchers independently coded the data using the strategy of open and axial coding (Strauss and Corbin 1998). The open coding process began by examining the transcripts line-by-line and assigning *a priori* codes to segments of text. Throughout this process, existing codes were continuously modified or deleted, and new codes were added until all transcripts were coded. The researchers held regular meetings to discuss the meanings of the codes, resolve discrepancies, and develop a coding schema. After open coding, axial codes were applied to specify the relationship between codes and to group codes into categories. Finally, data matrices were created to visually examine themes within and across categories. The researchers met to discuss and agree upon the predominant themes. Themes were considered important based on the criteria of frequency (i.e., the number of times mentioned) and intensity (i.e., theoretically salient) (Foss 2009). For the quotes below, we also examined corresponding partner interviews to assess whether there were consistencies or discrepancies between accounts. When corresponding content was available from both partners, we presented both partners' information for each theme. In many cases, partners' narratives were very similar and if not, we noted any discrepancies and what could be inferred.

Results

Twenty-four couples participated in the study (48 individuals; see Table 1). The mean age was 35.5 years (range: 22–51) and approximately half of participants (56%) were unemployed. Approximately 50% of index patients were male and 50% were female. Most couples were unmarried (75%) and less than half were living together (46%). On average, couples had been together for 6.6 years (range: 1.1–26.4). The majority of couples were seroconcordant HIV-positive (92%) and both on ART (63%). Of the 33 partners on ART, the average time on ART was 28.7 months (range: 2–158) and 81.8% reported perfect adherence to ART in the past 30 days. Of the 18 index patients on ART who were asked about their treatment supporter, 50% reported that their primary partner was their official treatment supporter.

The main themes below highlight how relationships both interfered with and supported adherence to HIV care and treatment. We also present evidence of a reciprocal link between relationship dynamics and adherence.

How Relationships Interfered with Adherence: Relationship Conflict

Participants described how relationship conflict could interfere with adherence, which was only mentioned by women. Some women noted how conflict directly led to missed pills, while others illustrated the potential of conflict to contribute non-adherence. One way that conflict could affect adherence was by inducing stress and forgetfulness. For example, one woman stated: 'I forgot it [the pills] the time we were fighting, and I went to my family [to get partner to stop fighting with her].' (female, age 41, both partners on ART). For this woman, 'forgetting' was a way to express how ending relationship conflict took priority over treatment adherence (see Hatcher et al. (2016) for similar findings in South Africa). Another woman described a conflict with her partner over whether she should take ART.

> He didn't want me to take it and he told me that he will find me some traditional medicine…Yes and I kept quiet and avoided disagreeing with him because he sometimes says he doesn't want to be judged he wants to be listened, then I kept quiet. The problem was I started taking tablets when I was pregnant and the tablets I was taking was only for TB and again they put me on treatment [ART] and there was nothing I will do, I had to [take them]. And he had no say [in the matter], [because] they said [start] now. When I came home with them, he said 'don't take them, throw them away' then I said I can't. I will take them because they are here and I can't just ignore them. And they told me clearly that my CD4 count is low, so I can't ignore them. And I did that for my child. (female, age 31, one partner on ART)

Earlier in the interview, the woman admitted that she had been physically and sexually abused by her partner, whom she also described as "the boss in the relationship". Similarly, her partner recounted the ongoing fighting and violence in the relationship. While he did not directly mention preventing her from taking ART, he appeared somewhat ambivalent about the benefits of ART and seemed to place greater importance on the role of food as medicine.

> I: When she was told that she will start treatment, what did you think?
>
> R: What I thought was that it will help because if a person is sick and gets treatment, it is better for her to get treatment and let it fail instead of not taking it. I don't have a solution of what to take and what not to take. Because I would be killing her and be killed by being sick. [So] I have to agree with her. But the thing that will make her well is to eat her food properly. (male, age 38, one partner on ART)

The fact that both partners mentioned violence and confirmed his preference for alternative medicines gives credence to the possibility that he tried to prevent her from taking ART. For this couple, conflict was the manifestation of male control and dominance over her use of ART.

Not only could relationship conflict affect adherence, a lack of adherence could lead to conflict—or specifically, verbal abuse. In general, verbal abuse was a common experience in the sample; around half of women mentioned forms of verbal abuse such as being shouted at, sworn at, or called names; however, some men also mentioned being verbally abused by their partners. For women, verbal abuse was linked to problems with adherence. In the

following passage, a woman described the verbal abuse she experienced after disclosing missed pills to her partner:

> He shouted at me, he is a bad man that is always shouting at someone…He said I am ignorant about my life and I told him that I didn't do it [miss the dose] on purpose. You know, I take care of everything here things like cooking, children etc., but when he comes back he'd just call me and ask for food, water for bathing, [and] everything, and you'll only find that he is shouting. (female, age 41, both partners on ART)

Fear of his negative reactions may prevent this woman from asking for help with her medications in the future. In the male partner's interview, he does not admit to shouting at her; however, he does appear to subscribe to rigid gender roles—as the female partner had expressed. When asked if he helps with household chores, he replied: 'No, she is the one that is responsible for the household activities. I did it before we got married, now I can't do it [because] I am a married man. I couldn't be seen carrying dishes outside, [or] washing some clothes.' (male, age 36, both partners on ART). Thus, it seems plausible that conflict in this couple may arise out of normative gender roles related to household duties and motherhood—which can affect adherence (also see Hatcher et al. (2016)).

How Relationships Enhanced Adherence: Partner Support and Relationship Dynamics

While conflict posed challenges to adherence in some couples, primary partners were generally described as having a positive influence on adherence by providing instrumental, informational, and emotional support. Instrumental support was the most common type of support provided, aimed at alleviating some of the economic barriers to accessing HIV care and treatment and maintaining a healthy diet. Forms of instrumental support included: providing transport or money to travel to the clinic; providing money for food to take with ART; providing childcare so a partner could attend clinic appointments; assisting with the preparation of healthy food; reminding a partner to take pills and attend appointments; picking up pills for a partner; and accompanying a partner to the clinic. For instance, one man discussed how he collaborates with his partner to overcome financial barriers to adherence.

> As you see me complaining that I don't have money. You see as we use pills [take ART], sometimes you find that it is almost time to take pills and there is nothing that we can eat. She is able to go home and find that even at home, they don't have food. Sometimes we will collect together money for bread and eat like that. But for now we cooperate very much. (male, age 36, both partners on ART)

Another man discussed how he helps provide food for his partner to take with ART when he is employed. Poverty and food insecurity were underlying issues for these couples, which was mitigated by the social support received from primary partners.

Providing treatment reminders was another form of instrumental support—especially for couples who were both on ART. In addition, some couples used the strategy of taking pills together to ensure both partners were adherent. For example, one man described how he and his partner are on the same ART regimen so when it is time for them to take their pills, he

brings water and pills to his partner and they take their medication together. He described this routine as a way to ensure that neither of them miss doses.

The type of reminder used (e.g., in person, phone call, text message) varied depending on the couple's circumstances and was not limited to dual-ART couples. In the following passage, a woman (with an HIV-negative partner) described how her partner adamantly reminded her to take the medications:

> He just reminds me the times of taking tablets and if I am late by a minute, he told me that I don't take them properly and asked when you are going to take your tablets because you use to take them around 8 o'clock. And realise that I made a mistake, he just made sure that he helps me. (female, age 31, one partner on ART).

Her HIV-negative partner echoed this: 'She takes her pill in the afternoon at eight, right in the afternoon I would say okay my sister, you will miss your time…eat so that you will take your pills.' (male, age 38, one partner on ART)

Several couples improvised their own mHealth (mobile health) interventions such as using a smart phone application to provide treatment reminders, which could be used in conjunction with other types of reminders depending on the situation. For example, one man stated:

> We WhatsApp [a mobile messaging application] each other. Sometimes she WhatsApps me. If I would come late, she would ask me to take treatment. If I know that I will be out maybe at six I would leave the house maybe when it is late, she makes sure that I take my pill just in case the time comes while I am not back at home. I am able to drink it wherever I will be so that I won't have a problem. Because at the clinic they encouraged us to keep time. (male, age 36, both on ART)

Forms of informational support included advising partners about the need to eat healthy food and to exercise, and to refrain from drinking alcohol. Regarding support for healthy eating, participants talked of the dangers of fatty food and cooking with oil, and the need to eat plenty of fruits and vegetables. For example, one woman in a discordant couple stated:

> Things like buying me some vegetables, things that I want that are so called 'body builders' and he bought them for me when I ask. Even if I didn't ask, he comes back with them because he is aware that I need them because he had attended the class. He also guided me that I should not cook with oil because I am someone who takes some tablets. (female, age 31, one partner on ART)

Her partner confirmed that he procures nutritious food for her, including buying her vegetables and preparing food to take with her medication.

Forms of emotional support included providing love, comfort, and reassurance of one's commitment to the relationship. For example, after spending some time away from each other, a woman realised her partner was having trouble with adherence and counseled him accordingly:

> We sometimes [had] been in distance [living apart] and realised that he is not taking his tablets properly. I went to him and asked. I told him, this is [your] life and it can't come back like this and that [when you are dead]. We talked so well, and the

> way in which we discuss we managed to visit some people, and if it's a boy and we noticed that his condition is not well, then we talk about this thing. (female, age 33, both partners on ART)

Relationship dynamics such as love, unity, trust, and commitment were identified as important forms of motivation for providing support related to HIV. When asked why she accompanies her partner to the clinic, one woman responded: 'I just accompanied him as someone I am in love with.' (female, age 45, neither partner on ART yet). Her partner also connected love with social support: 'I can see that she loves me by the things she does.' A man from another couple emphasised trust and unity in his narrative: 'I trusted her so I took her [to be his treatment supporter]. We are people that are always together, it means we talked, we are like friends.' (male, age 25, both partners on ART). His female partner confirmed their trust and communication. When asked if she feels free to talk openly with her partner, she says: 'Yes. Because I know him that even if I talk secret, he can't tell someone else, I trust him more than my female friend.' (see Rogers et al. (2016) for similar findings in Kenya).

Other participants described how commitment to the relationship enabled them to support each other, as evidenced by one woman in a sero-discordant couple: 'He always tells me that I mustn't think that he will leave me; he will always be next to me and sometimes comforts me not to be stressed and be always happy just like everyone.' (female, age 22, one partner on ART). Her partner confirmed how he helps her with stress: 'I take care of her so that she won't have stress…we joke and talk about things and that no one should have stress to think a lot.'

Couple ART Use Enhances Relationship Dynamics and Adherence

A final theme emerged around how the shared experience of taking ART brought couples closer together and improved relationship dynamics, which allowed couples to better support each other. Couples described how an HIV diagnosis sparked a process of reflection and re-evaluation of their relationship including their commitment, unity, love, trust, and overall relationship quality. There seemed to be a core belief that couples shared the same destiny because of dual infection and needed to depend on each other. For example, one man stated: 'It won't help to leave each other in this difficult time, it is the time that we should be united and become close because we really need each other's support.' (male, age 40, both partners on ART). For several participants, having young children may have motivated couples to prioritise the relationship and work together. As such, partners talked about the willingness to forgo their own independent interests (e.g., having an outside partner) for the needs of their partner and family. As one woman stated:

> I also told him that there is nobody that I will be in relationship with besides him because we are both HIV positive, so we should work on our lives together, and we had a child, and he sees us spending the rest of our lives in this relationship. (female, age 35, both partners on ART)

Although her partner does not mention their children, he told a similar story regarding his commitment to the relationship:

> I am willing to be in relationship with her up until we die because she managed to accept that I am taking tablets and after she knew, she also went for testing. I encouraged her to go and test, and she was not shocked by the fact that I am HIV positive because I think I am the one who was infected first. And she went for testing and we both ended up taking tablets and are collecting it for each other. We also remind each other about times of taking tablets. I just wish we could carry on loving each other and have enough money of getting married and be together till we die. (male, age 39, both partners on ART)

In another couple with both partners on ART, the man reflected on how starting treatment required them to leave any differences aside and refrain from arguing about how they contracted the virus. His female partner mentioned how he used to frequently drink alcohol and shout at the family, which stopped after he tested positive for HIV. Together, both partner accounts suggest that ART led to positive changes in their relationship.

Among the few discordant couples, there was some evidence that ART may have a positive impact on relationship dynamics. For example, an HIV-negative man discussed a renewed commitment to his partner after her diagnosis, and he pledged to stay with her and support her with ART. Thus, it is possible that similar processes involving a shift in relationship dynamics may also occur within discordant couples.

Discussion

Although some HIV patients did experience negative effects of their relationships on adherence, we were struck by the generally positive influence of partners, as well as the resourceful and resilient ways that partners utilised their relationships to maintain good adherence. In resource-poor settings where structural and economic factors can restrict access to HIV care and treatment, primary partnerships provide key sources of support for HIV patients grappling with these challenges. The significant impact of these relationships on adherence indicates a need to incorporate primary partners into clinical practice and in other behavioural interventions with HIV-positive individuals.

We found some evidence that relationship conflict may interfere with adherence to ART—specifically for women. As suggested by participants, this may occur through the pathway of poor mental health or as the manifestation of male dominance and control. Other qualitative studies point to mental health as a key pathway linking relationship dynamics (including conflict) and adherence (Illangasekare et al. 2014, Hatcher et al. 2016). Men’s controlling behaviours have also been linked to poor adherence among women, for example, by limiting women’s access to social support or by throwing out HIV pills (Kosia et al. 2016, Hatcher et al. 2016). We also found that for women, disclosure of missed pills acted as a trigger for verbal violence, which may be related to broader norms around male dominance. Fear of violence or experiences of violence prevents women from communicating about sensitive topics such as safer sex and HIV status (Maman, Hogan, and Kilonza 2001, Blanc 2001), and this reluctance may extend to adherence.

However, we found more support for a positive and supportive role that partners play in helping HIV patients maintain good adherence. The findings document a range of social

support provided, dependent on couples' unique circumstances, with instrumental support being the most common form of support. This suggests that within a context of high poverty, unemployment, and food insecurity, networks of exchange and reciprocity are essential for patients to obtain the resources required for adherence. We also found that relationship dynamics such as intimacy and trust served as motivating factors for provision of social support—which is supported by the dyadic interdependence model. Another study in Kenyan couples found support for the interdependence model in explaining health-enhancing behaviors related to HIV (Rogers et al. 2016).

Seroconcordant HIV-positive couples on ART expressed a renewed appreciation for their relationships, which was bound by the idea of a shared future. This is also consistent with the dyadic interdependence model, such that a perceived health threat may motivate couples to work together to overcome the threat to maintain the relationship (Lewis et al. 2006). The findings also suggest that for seroconcordant HIV-positive couples, there is a cyclical, rather than linear, relationship between adherence and relationship dynamics that operate in a feedback loop. For instance, couples with better quality relationships may be more equipped to support each other with HIV care and treatment; while at the same time, the act of taking ART together may bring couples closer together and improve the relationship. In Uganda, other research has showed how the shared experience of taking HIV medications, particularly PrEP and ART in sero-discordant couples, created a sense of solidarity for couples and helped HIV-infected partners sustain adherence (Nakku-Joloba et al. 2016).

Limitations

Because we recruited a clinic-based sample engaged in care, it is possible that we inadvertently over-recruited informants with stronger and more stable partnerships. A recent longitudinal study found that only 45% of HIV-positive individuals are linked into care (Haber et al. 2017), and our study recruited those who made this critical link, in which positive relationship dynamics may have played a role. In addition, because we did not recruit participants based on couple HIV status, our sample consisted primarily of seroconcordant HIV-positive couples who were more likely to self-select to enrol in the study (e.g., couples who are discordant may be more likely to be broken up or less stable). We also excluded couples if they had experienced severe violence in the past six months or not disclosed. However, based on another couples' study at this site (Darbes et al. 2016), more couples were ineligible due to a lack of disclosure rather than severe violence. Finally, while relationship conflict was an issue that many couples faced in their relationships, only a few participants made the connection between conflict and non-adherence. Because our analytic approach considered the intensity of underlying themes, not just frequency, we presented the findings on relationship conflict. Future studies should confirm these results in other types of couples who are serodiscordant and/or experiencing higher levels of discord.

Conclusions and Implications

This study demonstrates the important role of positive relationship dynamics and partner support on adherence among couples living with HIV in South Africa. The findings highlighted the positive aspects of relationships such as love, commitment, and trust, and how these factors shape partner support around adherence, which we believe is a novel

contribution to the literature on couples and HIV in sub-Saharan Africa. For some couples, the shared experience of HIV appeared to enhance couple dynamics—allowing partners to more fully support each other with HIV care and treatment. As more healthy individuals initiate ART through test-and-treat policies in sub-Saharan Africa, it will be critical to develop interventions with couples to optimise engagement in HIV care and treatment—including adherence. Such adherence interventions should capitalise on positive relationship dynamics and social support structures that exist within many primary partnerships, or work to improve relationship dynamics in couples with higher levels of discord. While the majority of couples-based HIV interventions focus on prevention and earlier stages of the HIV care continuum such as testing (Jiwatram-Negrón and El-Bassel 2014), there is the potential to adapt effective interventions to target issues of adherence. For example, a recent couples-based intervention trial in South Africa focused on improving relationship dynamics and communication skills showed efficacy in increasing uptake of couples' testing and counseling for HIV (Darbes et al. 2016). Such interventions could be adapted to help couples communicate and support each other with regards to HIV care and treatment. In South Africa, the concept of partner support is already included in Ministry of Health guidelines that recommend HIV patients nominate an official treatment supporter before initiating ART (National Department of Health 2010). Thus, there is an opportunity to potentially leverage existing clinical infrastructure to expand services for couples living with HIV. Yet this would need to be accomplished in a way that does not force women to disclose to male partners especially if there is the risk for violence. Regardless, it will be critical to continue to address upstream factors such as HIV status disclosure and intimate partner violence before research can move forward and reach couples in the most need of these services.

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Table 1

Background characteristics of the REACT study participants (48 individuals or 24 couples)

	Total Sample N (%), Mean (SD)	Female N (%), Mean (SD)	Male N (%), Mean (SD)
Individual characteristics			
Age (years)	35.5 (7.7)	34.9 (6.8)	36.1 (8.6)
Education			
Primary school or less	9 (18.7)	2 (8.3)	7 (29.2)
Some secondary school	28 (58.3)	17 (70.8)	11 (45.8)
Completed secondary school	11 (22.9)	5 (20.8)	6 (25.0)
Employed (yes/no)	21 (43.7)	5 (20.8)	16 (66.7)
HIV-positive (yes/no)	46 (95.8)	24 (100)	22 (91.7)
Taking ART (yes/no)	33 (68.7)	18 (75.0)	15(62.5)
Perfect ART adherence in the past 30 days (VAS scale)[a]	27 (81.8)	16 (88.9)	11 (73.3)
Length of time on ART (months)	28.7 (43.9)	26.6 (40.4)	31.6 (50.1)
Couple characteristics			
Married (yes/no)	12 (25.0)		
Living together (yes/no)	22 (45.8)		
Relationship length (years)	6.6 (6.8)		
Have children together (yes/no)	18 (37.5)		
Couple closeness (range: 1–7; IOS measure)	6.4 (1.0)	6.3 (0.9)	6.5 (1.1)
Couple HIV status			
Concordant positive	44 (91.7)		
Discordant	4 (8.3)		
Couple ART status			
Both not on ART	12 (25.0)		
Both on ART	30 (62.5)		
One on ART	6 (12.5)		

REACT=Relationships and Engagement in AIDS Care and Treatment; SD=Standard Deviation; VAS=Visual Analog Scale; IOS=Inclusion of Other in Self·

[a]Percentage calculated out of the total number who reported taking ART (n=33 total, n=18 women, n=15 men)