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What motivates serodiscordant couples to prevent HIV transmission within their relationships: findings from a PrEP implementation study in Kenya

Rena C. Patel^a, Anna M. Leddy^b, Josephine Odoyo^c, Keerthana Anand^d, Gaelen Stanford-Moore^e, Imeldah Wakhungu^c, Elizabeth A. Bukusi^{c,f}, Jared M. Baeten^g, and Joelle M. Brown^h

^aDivision of Allergy and Infectious Diseases, Department of Medicine, University of Washington, Seattle, WA, USA

^bDepartment of Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

^cCentre for Microbiologic Research, Kenya Medical Research Institute, Nairobi, Kenya

^dCenter for Global Health Sciences, University of California, San Francisco, CA, USA

^eSchool of Medicine, University of California, San Francisco, CA, USA

^fDepartments of Obstetrics and Gynecology and Global Health, University of Washington, Seattle, WA, USA

^gDepartments of Epidemiology, Global Health, and Medicine, University of Washington, Seattle, WA, USA

^hDepartments of Epidemiology and Biostatistics and Obstetrics, Gynecology, and Reproductive Sciences, University of California, San Francisco, CA, USA

Abstract

With the planned scale-up of pre-exposure prophylaxis (PrEP) for HIV prevention among serodiscordant couples in resource-limited settings, gaining an understanding of what motivates serodiscordant couples to prevent HIV is critical. We conducted 44 semi-structured, in-depth individual or couple interviews with 63 participants (33 HIV-infected and 30 HIV-uninfected participants) enrolled in a prospective implementation study of oral antiretroviral-based prevention in Kisumu, Kenya. Transcripts were iteratively analysed using inductive content analysis. Findings point to the importance of maintaining the emotional and economic stability of the partnership and family as motivators in preventing HIV transmission. Female participants identified fear of blame or potential violence for transmitting HIV as a motivator. Furthermore, couples primarily held the

CONTACT Rena C. Patel, rcpatel@uw.edu.

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ORCID

Rena C. Patel <http://orcid.org/0000-0001-9893-5856>

HIV-infected individual responsible for HIV prevention, but also held women more accountable for the use of prevention methods such as condoms. These themes substantiate traditional gender norms but also reveal how dyadic interdependence challenges these norms. As programmes in resource-limited settings scale up PrEP access, they should simultaneously capitalise on HIV serodiscordant couples' motivations for HIV prevention and address gender norms so women do not find themselves unduly responsible for the prevention of HIV transmission.

Keywords

Motivations; gender norms; HIV prevention; serodiscordant couples; Kenya

Introduction

Serodiscordant couples, or individuals in a sexual relationship where one partner is HIV-positive and the other is not, are a key target population for prevention of HIV given their increased risk for HIV transmission (Biraro et al. 2013). Evidence from sub-Saharan Africa suggests that the majority of new heterosexually transmitted HIV infections occur among serodiscordant, married or cohabiting couples (Allen et al. 1992; Biraro et al. 2013; Guthrie, de Bruyn, and Farquhar 2007). In Kenya, HIV serodiscordance is high, with an estimated 48% of married or cohabiting couples being serodiscordant (National AIDS and STI Control Programme (NAS COP) 2013). Combination HIV prevention strategies, including antiretroviral therapy (ART) for the HIV-infected partner and pre-exposure prophylaxis (PrEP) for the uninfected partner, have been shown to markedly reduce the risk of HIV transmission in this setting (Baeten et al. 2016).

With the advent of new strategies to prevent HIV transmission among serodiscordant couples, gaining an understanding of what factors influence and motivate serodiscordant couples to take up strategies to prevent HIV is important. In addition, understanding how prevailing gender norms and relationship dynamics influence perceptions of responsibility to prevent HIV is of critical importance, especially given the evidence suggesting that such factors shape HIV risk among both men and women (Higgins, Hoffman, and Dworkin 2010; Leddy et al. 2016). While several studies have examined motivations for use of PrEP and ART as HIV prevention among gay male couples (Brooks et al. 2015; Gamarel and Golub 2015; Karuga et al. 2016), relatively few studies have been published examining these motivations among heterosexual couples in sub-Saharan Africa (Ngure et al. 2016).

Furthermore, limited research has examined how gender norms and relationship dynamics intersect to shape couples' motivations to prevent HIV through combination HIV prevention methods (i.e. both ART and PrEP). An understanding of couples' motivations, and how they are influenced by these factors, will allow programmes in sub-Saharan Africa to better frame their HIV prevention counselling messages and implement HIV prevention interventions.

We conducted a qualitative study among heterosexual HIV-discordant couples participating in a PrEP demonstration study in Kisumu, Kenya to understand the factors influencing the uptake and use of HIV prevention strategies. The goal of the analysis was to understand what motivates couples to prevent HIV transmission, who within the partnership is

responsible for preventing the transmission and how gender norms and relationship dynamics shape these perceptions.

Methods

Study site and population

The study was conducted as a sub-study of a larger demonstration study in Kisumu, Kenya between August and September 2014. Kisumu County, located in western Kenya, has one of the highest HIV prevalence estimates in Kenya at 19.3%, compared with 6.0% nationally (National AIDS and STI Control Programme (NASCOP) 2014). Participants in this qualitative sub-study were already enrolled in the Partners Demonstration Project in Kisumu; details of this parent study are published elsewhere (Baeten et al. 2016) and are available in online Appendix 1. The qualitative study received approval from the Kenya Medical Research Institute and University of California, San Francisco ethics review boards.

Sampling and recruitment

For this investigation, we selected a quasi-random subsample of the participants enrolled in the Partners Demonstration Project in Kisumu who fell into one of four categories: (1) HIV-infected individual eligible for ART who initiated ART; (2) HIV-infected individual eligible for ART who declined ART initiation; (3) HIV-uninfected individual eligible for PrEP who initiated PrEP; and (4) HIV-uninfected individual eligible for PrEP who declined PrEP initiation. A detailed description of study procedures is published elsewhere (Patel, Odoyo et al. 2016; Patel, Stanford-Moore et al. 2016) and is available in online Appendix 1.

Eighty individuals were invited to participate in this qualitative study, and we conducted 44 in-depth interviews with a total of 63 participants (30 participants without HIV and 33 with HIV). Nineteen of the interviews were conducted with the couples together, and an additional four interviews were conducted with couples but individually; the remaining 21 interviews were conducted with only one individual from a couple. All participants provided written informed consent.

Data collection

The interviews were conducted by trained interviewers in Dholuo, the leading language of the ethnic Luo people of western Kenya, and digitally audio-recorded at the Partners Demonstration Project site in one of the patient-provider rooms. The interviewers used a semi-structured interview guide (online Appendix 2) to prompt discussions on the following themes: (1) perceptions of HIV prevention methods, including advantages and disadvantages of each; (2) reasons for accepting or declining HIV prevention methods, including motivations for doing so; and (3) influence of prevention of transmission to partner or infant influencing HIV prevention method use.

Data analysis

Translated transcripts were imported into NVivo 10.1 for coding. Transcripts from the interviews were iteratively analysed using inductive content analysis. An initial codebook was developed from the interview guide, which was further refined with discussion and

consensus as the initial transcripts were coded. The first 10 transcripts were double coded by at least two members of the study team, and differences in coding were resolved through discussion until consensus was reached. After all the data had been coded, the investigators used an iterative process of reading transcripts, applying inductive codes, comparing and contrasting codes and identifying convergent and divergent themes. Principles of reflexivity (Shaw 2016), such as acknowledging how the identity of the interviewer may have influenced the information presented by participants, and rigour (Patton 1999), such as exploring for discrepant data and remaining faithful to participants' experiences, guided our multidisciplinary team's approach to this analysis.

In this paper, we present the analysis pertaining to motivations for preventing HIV transmission, perceptions of who is responsible for HIV prevention and how gender may influence these motivations and perceptions. To guide the presentation of and add explanatory power to our analysis and contextualise our findings, we employ constructs from the theory of gender and power (Lewis et al. [1982] 2006) and the dyadic interdependence model (Connell 1987); however, these theoretical frameworks did not *a priori* guide the study design or analysis. The theory of gender and power postulates that gender inequities and power imbalances emerge and are sustained through three intersecting social structures: the sexual division of labour, the sexual division of power and the structure of cathexis. The dyadic interdependence model posits that interpersonal or relational factors influence motivation and, in turn, risk-reducing behaviour change.

Results

Participant characteristics

We conducted in-depth semi-structured interviews with 63 participants (30 HIV-uninfected and 33 HIV-infected; Table 1). Among the HIV-uninfected participants, 7 were female and 23 were male. HIV-infected participants consisted of 24 women and 9 men. The median age for HIV-uninfected partners was 34 years (IQR: 28–38), and the median age for HIV-infected partners was 32 (IQR: 23–37). The majority of the participants were married (97% HIV-uninfected; 94% HIV-infected). The median number of months the couples had known of their serodiscordant status was 1.0 month, while the median number of years they had been cohabitating was 2.0 years for both HIV-uninfected and HIV-infected participants. The median CD4 count for HIV-infected individuals was 305 cells/mm³; 73% were in WHO clinical stage 1, and 27% were in WHO clinical stage 2 of their HIV infection.

Overview of results

Findings from this study elucidate the factors that motivate serodiscordant couples to prevent HIV transmission, as well as whom they hold responsible for HIV prevention (Table 2). Couples in this study described how they were motivated to prevent HIV transmission in order to maintain the emotional and economic stability of their partnership and family. Fear of blame or potential violence that could result from transmitting HIV was another motivator. Finally, couples primarily held the HIV-infected individual responsible for HIV prevention, but also held women more accountable for use of prevention methods such as condoms. Below we present in greater detail the variations of motivations and perceptions

articulated by the participants. Note that pseudonyms are used to protect the confidentiality of participants.

Motivations for preventing HIV transmission

Relationship stability and partner support—Participants articulated a range of motivations to prevent HIV transmission, including the need to ensure the emotional and economic stability of their relationship and family. Participants described how HIV serodiscordance has caused relationships to dissolve in the past due to the HIV-uninfected partner's fear of becoming infected. However, participants argued that now, with the advent of PrEP, they are able to prevent transmission, thereby ensuring the stability of their relationship.

It [PrEP] not only protects the HIV-negative partner but also helps many marriages to thrive. In the past many marriages involving serodiscordant couples collapsed. (Lilian, female, 35 years old, HIV-infected, on ART)

When I was being counselled, I was told that this was not the end of life because we could continue staying together in our marriage without any problems. Many people are living in discordant marriage and we are not the first to be affected hence I felt relieved in my heart ... I like my life and given that these drugs could help me prevent myself from being HIV-infected regardless of staying with my wife motivated me to take these drugs. (Philip, male, 36, HIV-uninfected, on PrEP)

Some couples discussed actively participating in HIV prevention as a way to demonstrate their commitment to their partner and the relationship. Such actions were often conceptualised as a way for the female partners, whether HIV-infected or uninfected, to demonstrate 'care' and 'love' for their male partners. For example, when one HIV-uninfected male participant was asked how he felt about the fact that he is protected from HIV because his partner takes ART, he said he was 'happy because she shows concern and would love to protect our relationship' (Toni, male, 58 years old, HIV-uninfected, on PrEP).

Some participants discussed how they wanted to prevent HIV transmission to their partners because their partner provided them with much-needed encouragement and emotional support in the context of their HIV infection. One HIV-infected man, for example, who reported using condoms to prevent HIV transmission, said,

I am very happy about protecting her from getting infected with the virus and I have the desire to have her remain the same because she encourages me a lot and this makes me feel like further protecting her. (Wilson, male, 46 years old, HIV-infected, declined ART)

HIV-infected participants particularly stressed the importance of the support their partners offered them, with some participants suggesting that women were more likely to experience the sense of obligation to protect their male partners from HIV in order to reciprocate this support. For example, when one HIV-infected woman was asked why she felt responsible for preventing HIV transmission to her partner, she said:

It's my responsibility because of the kindness he showed ... At the time I was found to be HIV-positive he really encouraged me to take it normal and go ahead with medications. He promised to always support me in whatever aspect he could. (Sarah, female, 23 years old, HIV-infected, on ART)

In contrast to emotional support being conceptualised within the female domain, participants identified economic support as part of the male domain. Participants frequently expressed the belief that HIV-infected women were invested in protecting their uninfected male partners from HIV because these men financially supported them. For example, when a participant was asked if he thought his partner ever had any conflicting feelings about protecting him from HIV transmission by taking ART, he said:

I don't think so ... Because the last time I saw her, she was going to rent a house at Nyamasaria and I was the one who was still going to pay for her that house rent. (Rono, male, 45 years old, HIV-uninfected, on PrEP)

Another participant generalised this sentiment and said he thought his partner felt good about preventing HIV transmission through ART because 'when [the male partner] remain(s) negative [he] can support her more' (Abraham, male, 23 years old, HIV-uninfected, on PrEP).

Stability of family and security of children—Another motivation participants discussed for preventing HIV transmission to their partners was the desire to ensure that at least one partner could continue to provide for the family. For example, when an HIV-negative man was asked why he is motivated to prevent HIV transmission by taking PrEP he said, 'Because I am the head of that household ... I'm thinking I should be healthy so that I may provide for my family' (Eliud, male, 31 years old, HIV-uninfected, on PrEP).

Some participants suggested that women were particularly motivated to prevent HIV transmission to their partners by taking ART so that their children would be provided and cared for at times when they were too sick to perform their childcare duties, or in the event that they died. For example, one participant said she decided to take ART because she wanted to 'ensure [her partner] doesn't contract the virus for the sake of [their] children' (Irene, female, 22 years old, HIV-infected, on ART).

Fear of blame/responsibility for transmission and violence—Finally, fear of blame and responsibility for HIV transmission, and the potential violence associated with such blame, motivated some women to engage in HIV prevention behaviours.

For example, when asked why she wanted to prevent HIV transmission to her partner, one HIV-infected woman responded, 'I'll be considered responsible for transmitting the infection to my partner. He would sometimes look at me and wish to beat me to the extent that I became so afraid of him' (Lindah, female, 25 years old, HIV-infected, declined ART). Another female participant echoed the perception that blame of HIV transmission could lead to violence from their male partner when she revealed, 'Some may even murder the positive partner because of the fear of getting infected' (Edith, female, 33 years old, HIV-infected, on ART).

Ultimately, participants argued that this fear encouraged them to adopt strategies, such as ART, in order to prevent HIV transmission to their partners.

Responsibility for preventing HIV transmission

Couples in this study offered a range of views about which partner was responsible for preventing HIV transmission within the relationship. Some participants argued that the HIV-infected partner was primarily responsible for preventing HIV transmission in the relationship, while others asserted that it was the responsibility of both partners. Few participants believed it was the HIV-uninfected partner's responsibility alone (Table 2).

HIV-positive partner's responsibility—All HIV-positive individuals, largely women in our study, expressed that they felt it was their responsibility to prevent HIV transmission to their uninfected partners because they were the ones who were infected. As one HIV-infected woman said, 'It is mine [my responsibility] because I am the one who is positive and should not expose him to the virus' (Njeri, female, 34 years old, HIV-infected, on ART). One HIV-infected man also said he held the majority of the responsibility for preventing HIV transmission, but that his wife also needed to remind him to use a condom during sex,

I think it should be my responsibility to protect her ... first I am the one who is positive; she can as well help me by reminding me to use protection. Though I should be in the front line to protect her. (Robert, male, 41 years old, HIV-infected, on ART)

Two HIV-negative men said that it was solely their HIV-positive female partners' responsibility to prevent HIV transmission. Both of these men declined PrEP and drew on the concept that it was the HIV-infected woman's responsibility to remind them to use condoms during sex. One man stated, 'it is her responsibility to make sure I remain uninfected. She is the one who is supposed to remind me to use condoms' (James, male, 21 years old, HIV-uninfected, declined PrEP). The other man echoed the belief that it is the woman's role and responsibility to negotiate condom use:

Sometimes when I have urge for sex and I feel like sleeping with her, she normally confirms with me if I have a condom. If I do not have any condom, she denies me my conjugal rights and we quarrel till morning. Then the next day she goes to the clinic and fetches some condoms for my use ... It is my partner's responsibility [to prevent HIV transmission to me] ... I say so because she is the one who is HIV-infected and I am uninfected. For instance, at times I can come blindly to have sex and she is the one who needs to tell me the right way to do it. (Dennis, male, 43 years old, HIV-uninfected, declined PrEP)

Joint responsibility—Those participants who interviewed together in the study generally reported that it was the responsibility of both partners to prevent HIV transmission in the relationship. Often the infected partner, largely women in our study, first claimed responsibility and then the uninfected partner claimed responsibility too or indicated it was a joint responsibility. Occasionally, one of the partners indicated a joint responsibility and the second partner confirmed this view. These participants expressed that there was a role for both partners to support each other in engaging in HIV prevention behaviours, whether it be

taking ART or PrEP or using condoms during sex. Some participants even suggested that HIV prevention would only work if both partners took responsibility. For example, when one couple was asked whose responsibility it was to prevent HIV transmission, one partner said, 'It's our responsibility, both of us', and the other partner stated, 'Both of us because we need each other' (Toni, male, 58 years old, HIV-uninfected, on PrEP; Grace, female, 45 years old, HIV-infected, on ART). A man from a different couple explained this dynamic further:

It is both our responsibility ... to ensure that we keep on reminding each other to take the medications and use protection for me to remain HIV-negative. We should look after each other. (Abraham, male, 23 years old, HIV-uninfected, on PrEP)

HIV-negative partner's responsibility—Two HIV-uninfected participants suggested that it was the uninfected partner's responsibility to prevent HIV transmission. Their discourse around HIV prevention focused on the need to take personal responsibility for staying negative. One participant suggested some distrust of his partner and the need to take the necessary steps himself for HIV prevention. For example, when asked whose responsibility it was to prevent HIV transmission in the relationship, an HIV-uninfected man stated:

It is mine [responsibility], in order to protect myself ... You know if I were to have unprotected sex with her she could automatically accept it so it is upon me to ensure that I use the condom since I know her status. (Patrick, male, 33 years old, HIV-uninfected, declined PrEP)

Discussion

Findings from this study among HIV serodiscordant couples in Kisumu, Kenya suggest that maintaining the emotional and economic stability of the relationship is a leading motivation to prevent HIV transmission. Furthermore, although some serodiscordant couples viewed the responsibility of HIV prevention to be primarily that of the HIV-infected individual, other couples assumed joint responsibility for HIV prevention. Our results suggest that while traditional gender norms appear to shape these motivations to some extent, themes of interdependence may be changing or challenging these gender norms.

Traditional gender norms: gender and power

Study participants described motivations for HIV prevention that were both more equitable and relationship-oriented but also adherent to traditional gender norms. We employ the three overlapping structures in the theory of gender – namely, the sexual division of labour, the sexual division of power and the structure of cathexis – which are present to varying degrees in our findings, to further discuss how traditional gender norms may shape our participants' motivations.

Sexual division of labour—The sexual division of labour refers to the differential access men and women have to economic opportunities, such that men often have greater access to paid jobs, while women are expected to take unpaid or lower-paying jobs (Connell 1987; Maharaj 1995). Although both women and men engage in agricultural production in western

Kenya, for example, women are largely responsible for lesser-earning subsistence farming (African Development Bank 2007; Dalsgaard et al. 2016). Indeed, 68% of the currently married women in western Kenya earn less money from paid work than their husbands (Kenya Ministry of Health and National Bureau of Statistics 2015) and are expected to perform unpaid work including childcare and cooking (African Development Bank 2007; Carroll et al. 2016).

In this study, some participants drew upon a narrative of the sexual division of labour to describe how they were motivated to prevent HIV transmission. Specifically, participants reported the need for women to use ART to prevent HIV transmission to the HIV-uninfected male partner so he could continue to provide financially for the family and care for the children. Others have documented how the sexual division of labour influences the uptake of biomedical HIV prevention strategies among serodiscordant couples (Carroll et al. 2016; Fowler et al. 2015). For example, men's fear of side effects from PrEP, particularly influencing their ability to work and provide for their family, prevented them from accepting PrEP (Fowler et al. 2015). Interestingly, in the present study, men's role as a provider appeared to motivate their interest in using PrEP.

Sexual division of power—The sexual division of power refers to the unequal distribution of authority and control, often exhibited through male control over decision-making and violence against women (Connell 1987). Heterosexual relationships in western Kenya are often marked by unequal power dynamics (Harrington et al. 2016; Kenya Ministry of Health and National Bureau of Statistics 2015). For example, in western Kenya, less than half of the married women who earn their own income make independent decisions on how to spend those earnings (Kenya Ministry of Health and National Bureau of Statistics 2015). Gender-based, especially intimate partner, violence is common in this context, with 30% of women reporting experiencing physical violence in the past year and 38% of men believing that wife beating is acceptable (Kenya Ministry of Health and National Bureau of Statistics 2015).

That fear of blame and violence they would face as a result of their partner's infection motivated some women in this study to prevent HIV transmission provides an example of the sexual division of power. In particular, this fear reflects an underlying power imbalance between the women and their male partners, whereby the possibility of the man physically exerting his control and power over the woman is quite real (Connell and Messerschmidt 2005; Jewkes and Morrell 2010).

Cathexis – the structure of social norms—Finally, the structure of cathexis regulates sexuality by defining what constitutes 'normal' sexual behaviour for men and women (Connell 1987; Maharaj 1995). In Eastern and Southern Africa, men, but not women, are often expected to have a strong sex drive, engage in unprotected sex and have multiple concurrent partners (Leddy et al. 2016; Shai et al. 2012; Shattuck et al. 2013). Our finding that women were primarily held responsible for preventing HIV transmission is an example of how sexual norms in this setting increase the inequality that women experience in relationships. Dynamics of valuing male virility while expecting women to have little interest in sex are evidenced in western Kenya, where 18% of men, as opposed to only 1%

of women, reported having concurrent sexual partners in the past year (Connell and Messerschmidt 2005; Jewkes and Morrell 2010; Kenya Ministry of Health and National Bureau of Statistics 2015).

In this study, the majority of HIV-infected individuals, both men and women, expressed the belief that it was their responsibility to prevent HIV transmission to their uninfected partner. However, HIV-infected male participants prefaced their own responsibility for HIV prevention with the distinction that it was the women's duty to ensure condom use. Prior research in this region has revealed a dominant discourse that 'real men' require 'real sex', often defined as unprotected sex (MacPhail and Campbell 2001; Maticka-Tyndale 2012). Condom use is perceived to be in conflict with masculine norms of virility by preventing pregnancy and limiting the men's ability to fulfil their 'biological need' for sexual pleasure (Leclerc-Madlala 2009; Maticka-Tyndale 2012; Maticka-Tyndale and Kyeremeh 2010). Evidence suggests that male endorsement of these norms is significantly associated with reduced condom use among heterosexual couples in sub-Saharan Africa (Leddy et al. 2016; Shattuck et al. 2013). The reluctance of men in this study to assume responsibility for condom use may reflect these men's attempt to assert their own masculinity in the context of HIV prevention, which requires them to use condoms to prevent HIV transmission.

It is also possible that this finding may reflect normative expectations of women. Dominant gender norms dictate that women should be pure, faithful and nurturing (Leclerc-Madlala 2009; Schaan et al. 2016). In this context, health-promoting behaviours, such as condom use, may be one way that women are expected to enact their womanhood (Chong and Kvasny 2007; Leclerc-Madlala 2009). Unfortunately, this expectation is usually at odds with feminine ideals of passivity and submissiveness to men. Given this dynamic, women in this setting are often unable to successfully negotiate condom use and other HIV prevention behaviours with their male partners (MacPherson et al. 2014; Pettifor et al. 2004). As such, there is a real opportunity here to present oral PrEP and ART as a couple-level strategy for HIV prevention that can be used by men or women to strengthen their existing relationship and help neutralise dominant gender norms for HIV prevention.

Changing gender norms: the role of economic and emotional interdependence

While traditional gender norms appeared to shape motivations, couples' economic and emotional interdependence on each other seemed to play an equally prominent role in our participants' narratives. For example, both male and female participants articulated that they were motivated to prevent HIV transmission in order to preserve the emotional stability of their relationship. Participants described that serodiscordance often resulted in the dissolution of relationships due to the fear of HIV transmission. However, participants resoundingly viewed the use of ART, PrEP and/or condoms as important means of preventing HIV transmission, demonstrating their care for each other and commitment to the relationship, and allowing their relationships to thrive. This finding echoes results from other studies in Eastern Africa, which have found that serodiscordance destabilises relationships and that HIV prevention, including PrEP, is viewed as a method to preserve relationships in the context of serodiscordance (Ngure et al. 2016; Patel, Stanford-Moore et al. 2016). Such motivations are supported by the dyadic interdependence model (Lewis et al. [1982] 2006),

which posits that positive relationship dynamics, in conjunction with a perceived health threat, motivates couples to work together to overcome such a threat in order to maintain the relationship.

This sentiment was most clearly echoed by couples who interviewed together, when asked whose responsibility it was to prevent HIV transmission. These couples often assumed joint responsibility for HIV prevention outright, or quickly claimed joint responsibility after the infected partner stated it was his or her responsibility. It is possible that this finding reflects a difference in the couples who came for interviews together and those who underwent the interviews alone. In particular, couples who came for the interview together may have more equitable relationships and better communication skills than couples who came as individuals. Indeed, prior research has found that couples with more equitable relationships are more likely to communicate openly about safe sex and engage in HIV prevention behaviours including condom use (Hendriksen et al. 2007; Rispel et al. 2012). Alternatively, it is possible that the high level of agreement among couples was related to the ‘performance of gender’ (Butler 1988), created by interviewing both partners together in a setting where gendered power imbalances are prevalent. Such dynamics could have made the women less likely to challenge their male partner’s views during couple vs. individual interviews. Regardless, efforts need to continue, and possibly intensify, to help build more gender-equitable norms for health and safety by stressing the interdependence in couples’ relationships, so that women do not find themselves being held solely responsible for preventing HIV transmission. Future HIV prevention efforts need to more explicitly use a gendered lens in designing and implementing their interventions to help bring the HIV epidemic to an end, especially among adolescent girls and young women (UNAIDS 2015 UNAIDS 2016).

Ultimately, both relationship interdependence and gender norms appeared to play some role in shaping the serodiscordant couples’ motivations for preventing HIV in this study. Furthermore, it appears that interdependence in the relationship allowed individuals in our study to transcend some of the existing traditional gender norms surrounding relationship dynamics, suggesting that traditional gender norms may be changing in this context, possibly due to rapid socio-economic changes in this region (Creighton and Yieke 2006). Nonetheless, it is important to note that other cultural norms, such as distrust of Western medicine or scepticism towards some preventive interventions, may also contribute to shaping these couples’ motivations (Fowler et al. 2015; Patel, Odoyo et al. 2016).

There are several strengths to this study. First, we conducted the study among heterosexual serodiscordant couples and frequently interviewed couples together, which allowed us to elicit aspects of relationships that influence motivations to prevent HIV transmission. It is possible, though, that couples who came for interviews together likely had better relationship dynamics than couples who came to interviews individually, predisposing our findings towards more gender-equitable views. Likewise, that our sub-study sample was derived from the parent study population likely yielded more gender-equitable findings than may be prevalent in the general community, as couples with stronger relationships and communication may be more likely to enrol in a couples study. Second, we ensured adequate saturation of themes with a relatively large sample size. However, we sampled participants

from only one geographic region of Kenya, which may limit the transferability of the results to different regions of Kenya or elsewhere, where HIV prevention beliefs and dynamics among serodiscordant couples may be different.

Conclusions

Our findings demonstrate that heterosexual HIV serodiscordant couples from Kisumu, Kenya are most motivated to prevent HIV transmission in order to maintain the emotional and economic stability of their partnership and family. Furthermore, couples articulated that the responsibility of prevention was primarily placed on the HIV-infected individual, though women were more often held accountable for initiating HIV prevention methods regardless of their HIV status. As programmes in resource-limited settings scale up HIV prevention efforts, including PrEP and ART use, they should capitalise on the emotional and economic motivations to prevent HIV transmission among serodiscordant couples to increase uptake of HIV prevention tools. Moreover, there is a real opportunity to present PrEP and ART as a couple-level HIV prevention strategy that can be used by men or women and help neutralise dominant gender norms. Nonetheless, community-wide efforts need to continue to change gender norm perceptions so women do not find themselves unduly responsible for the prevention of HIV transmission.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Baseline characteristics of participants (median, IQR for continuous variables).

Variable	HIV-uninfected partners	HIV-uninfected partners
	<i>n</i> = 30	<i>n</i> = 33
Age (years), median	34 (28–38)	32 (23–37)
Gender	7 female, 23 male	24 female, 9 male
Married	29 (97%)	31 (94%)
Number of living children, median	3 (0–5)	1 (1–3)
Number of living children with study partner, median	0 (0–2)	0 (0–2)
Ethnicity		
Luo	26 (87%)	31 (94%)
Luhya	3 (10%)	2 (6%)
Kalenjin	1 (3.3%)	0
Years of schooling completed, median	8 (7–12)	8 (7–12)
Monthly income, median	3000 Ksh (500–8000)	2000 Ksh (0–5000)
Number of years cohabitating together, median	2 (range 1 month–20 years)	2 (range 2 months–23 years)
Number of months discordant status known, median	1.0 (range 1.0–72)	1.0 (range 1.0–13)
CD4 count cells/mm ³ , median		305 (233–431)
Plasma viral load copies/mm ³ , median		71,174 (23,728–245,278)
WHO stage		
Stage 1		24 (73%)
Stage 2		9 (27%)
Stage 3		0
Stage 4		0
Initiated PrEP during study, partner on ART	19 (63%), 21 (70%)	–
Initiated ART during study, partner on PrEP	–	23 (70%), 22 (67%)

Table 2

Motivations and responsibilities in preventing HIV transmission among serodiscordant couples.

Themes	Sub-themes
Motivations for preventing HIV transmission	
<i>Relationship stability and partner support</i>	<ul style="list-style-type: none"> • Act of prevention, demonstrates commitment to partner and the relationship • Ability to prevent HIV transmission, through ART and PrEP, ensures stability of relationship • HIV-uninfected partner provides infected partner with emotional support • HIV-uninfected partner provides financial support to HIV-infected partner
<i>Stability of family and security of children</i>	<ul style="list-style-type: none"> • HIV-uninfected partner can continue to provide for the family • HIV-uninfected partner can care for children should something happen to HIV-infected partner
<i>Fear of blame/responsibility for transmission and violence</i>	<ul style="list-style-type: none"> • Fear blame and potential violence for transmitting HIV to uninfected partner
Responsibility for preventing HIV transmission	
<i>HIV-infected partner's responsibility</i>	<ul style="list-style-type: none"> • HIV-infected partner's responsibility • HIV-infected male partner's responsibility, but their female partner needs to remind them to use condoms • HIV-infected female partners' responsibility, and it is also the female's responsibility to remind them to use condoms
<i>Joint responsibility of both partners HIV-uninfected partner's responsibility</i>	<ul style="list-style-type: none"> • HIV prevention only works if both partners work together • Need to take personal responsibility for prevention • Distrust of HIV-infected partner leads to HIV-uninfected partner taking responsibility for prevention