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My intention was a child but I was very afraid: Fertility intentions and HIV risk perceptions among HIV serodiscordant couples experiencing pregnancy in Kenya

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Abstract

We sought to understand fertility intentions and HIV risk considerations among Kenyan HIV serodiscordant couples who became pregnant during a prospective study. We conducted individual in-depth interviews (*n*=36) and focus group discussions (*n*=4) and performed qualitative data analysis and interpretation using an inductive approach. Although most of the couples were aware of the risk of horizontal and vertical HIV transmission, almost all couples reported that they had intended to become pregnant and that the desire for children superseded HIV risk considerations. Motivations for pregnancy were numerous and complex: satisfying desired family size, desire for biological children, maintaining stability of the union and sociocultural pressures. Couples desired strategies to reduce HIV risk during conception, but expressed hesitation towards assisted reproductive technologies as unnatural. HIV prevention programs should therefore address conception desires and counsel about coordinated peri-conception risk reduction strategies.

Keywords

fertility; HIV; serodiscordant couples; Kenya

Background

Natural conception poses substantial risk of HIV transmission in HIV serodiscordant partnerships (Kisakye, Akena & Kaye, 2010; Mathews et al.,2013; Nattabi, Thompson, Orach & Earnest 2012) yet fertility rates in such partnerships are often high (Heffron et al.,

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2010; Ngure et al., 2012). Fertility desires among HIV-infected men and women are strong and influenced by personal, interpersonal, and cultural factors (Chen, Phillips, Kanouse, Collins & Miu, 2001; Cooper et al., 2009; Kaida et al.,2013; Nattabi, Thompson, Orach & Earnest, 2009; Paiva et al., 2007). Assisted reproductive technologies (Mathews, Baeten, Celum & Bangsberg,2010), antiretroviral therapy (ART) to reduce the infectiousness of HIV-infected persons (Cohen et al.,2011), and pre-exposure prophylaxis (PrEP) for HIV-uninfected persons (Baeten et al., 2012) offer new approaches to reduce the risk of horizontal HIV transmission during conception.

Few studies have explored how HIV serodiscordant couples balance fertility desires against their HIV risk and men are rarely included in these studies. We sought to explore fertility intentions, risk considerations, and the acceptability of potential risk reduction strategies among both members of Kenyan HIV serodiscordant couples who recently conceived, to inform interventions to reduce HIV transmission risk during peri-conception in serodiscordant relationships.

Methods

This qualitative study was conducted among HIV serodiscordant couples attending the Thika, Kenya site in the Partners PrEP Study, a randomized clinical trial of daily oral PrEP for HIV prevention (Clinicaltrials.gov number NCT00557245). In that trial, all participants received individual and couples' HIV risk reduction counselling at each monthly (for HIV-uninfected) and quarterly (HIV-infected) study visit, free condoms, and access to contraception (Baeten et al., 2012).

We purposefully recruited couples from the 20 HIV-uninfected and 50 HIV-infected women who became pregnant prior to the announcement of the trial's positive primary efficacy findings (in July 2011). We conducted 36 in depth interviews (IDIs, both members of 18 couples: 10 in which the female partner was HIV infected and 8 in which the female partner was HIV uninfected). Members of the couple were interviewed separately during IDIs with no break between interviews to prevent couples from discussing their responses. Additionally, we conducted 4 focus group discussions (FGDs) stratified by gender and HIV status: one group of 5–8 participants each for HIV-infected women, HIV-uninfected women, HIV-infected men, and HIV-uninfected men. IDIs and FGDs were conducted in Kiswahili or English following semi-structured interview guides to explore the following key topics: motivations for childbearing, fertility intentions, and knowledge/use of safer conception methods (Mathews & Mukherjee, 2009).

Audio-recorded interviews were transcribed and translated into English. KN, SV and KC reviewed the transcripts separately for theme generation using an inductive approach (Bernard & Ryan, 2010; Miles &Huberman, 1994; Strauss & Corbin, 2008). We reviewed the categories and agreed on a codebook (Macqueen, McLellan, Kay & Milstein 1998), which we applied using ATLAS.ti (version 6.1.2, Berlin).

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We obtained ethical approval from the Kenyatta National Hospital Ethical Review Committee and University of Washington Institutional Review Board. All participants provided written informed consent.

Results

Of 56 total informants (29 women, 27 men), the age ranged from 21 to 35 years for women and 22 to 47 years for men. All but one couple were married and the majority had at least one child already before conceiving during the trial. About half of the women were still pregnant when they were interviewed. Three salient themes emerged: fertility intentions and motivations, HIV risk perceptions, and peri-conception risk reduction strategies.

Fertility intentions and motivations

Most of the HIV serodiscordant couples interviewed reported that their pregnancy was intentional (Table, Theme 1), preceded by discontinuing contraceptives and condoms in order to conceive and resuming condom use after conception. Being in an HIV serodiscordant relationship did not alter pregnancy intentions, with couples having already identified their desired family size prior to being HIV tested together and discovering their serodiscordancy. Common motivations for child bearing included fulfilling the couples' preferred family size, desire for biological children (including for those who had children only from another partnership), maintaining partnership stability, and external sociocultural pressures. Some participants described having a child as central to their identity – *"children define you"*. Several participants noted pressure to have a child named after one's parents, a local custom.

Most couples reported that decisions to conceive were mutual. When fertility desires were stronger among women, childbearing decisions involved negotiation; in contrast, when the male partner had stronger fertility desires, power was evident in the language used to describe the discussions (men used words such as *"must", "I told",* and *"force"* [example: *"so you must force her so that she can have them…"*]), coupled with threats of abandonment if the female partner did not agree to bear more children. In the FGDs, women reported that although men could *"force"* their decision on women, the final decision was actually theirs – insinuating that they could employ more subtle means of control, by using discrete contraceptive methods.

HIV risk perceptions

HIV-uninfected partners recognized that there was risk of HIV acquisition associated with conception attempts, with some concerned of very high risk (Table, Theme 2). HIV-infected partners generally expressed concern about transmitting HIV to their partners. Couples described feeling helpless and vulnerable to HIV while trying to conceive. Uninfected partners were relieved when they remained uninfected after unprotected sex, which for some reinforced a belief in divine protection.

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Peri-conception HIV risk reduction strategies

Most participants knew that limiting unprotected sex to days with peak fertility would reduce HIV risk but lacked the ability to identify these times (Table, Theme 3). Many informants had heard about assisted reproductive technologies (including sperm washing [for couples with HIV-infected men] and using a syringe to self-inseminate [couples with HIV-infected women]) from health care workers, yet none of couples had considered using these methods. There was consensus that technologically advanced artificial insemination processes were too expensive for most couples and participants reported numerous fears and suspicions, such as an inadvertent sperm mix-up at a fertility center, harm to women's health, "*expiry*" of or "*weak*" sperm, and a risk of congenital abnormalities. The majority of men and women expressed opposition to insemination through any method other than sexual intercourse and referred to their knowledge of syringe insemination in cattle breeding and therefore *"not the right way to conceive."* Others stated that some of the methods were difficult to use or counter to their religious beliefs. A few couples with HIV-uninfected men had received a syringe to try self-insemination, but they opted to conceive naturally. Some informants hoped for protection by PrEP and some men viewed PrEP as a protective step that did not threaten their masculinity. None reported awareness of ART use by the HIV-infected partner as an effective method of risk reduction.

Discussion

Complex personal, social, and cultural expectations motivated HIV serodiscordant couples to conceive naturally despite the substantial risk of horizontal and vertical HIV transmission. For most of the couples interviewed, the desire for children and natural conception outweighed HIV risk. Many couples were aware of artificial reproductive technologies, but lacked specific information and resources to pay for them and were often suspicious of such options.

Although fertility decision-making was often mutual, men and women approached fertility differently. Men desired biological children – especially when their female partners had children from a previous relationship – and to name a child after their immediate relatives. Women desired pregnancy to maintain partnership stability and meet social-cultural expectations. These factors were highly intertwined and underscore the significance attached to children and fertility in sub-Saharan Africa and elsewhere (Chen et al., 2001; Cooper et al., 2009; Kaida et al.,2013; Nattabi et al., 2009; Paiva et al., 2007;Taylor, Mantell, Nywagi, Cishe & Cooper, 2013). When women desired conception, negotiation about decisions was reported; this is in contrast to decisions about condom use, where women may have little power to negotiate (Ngure et al., 2011). When only men desired children there was little negotiation, an important area for counseling.

We found that assisted reproductive technologies were viewed with uniform suspicion. Healthcare workers need accurate safer conception information and tools to initiate discussion and counseling about peri-conception HIV risk reduction practices. Additional acceptable methods for reducing peri-conception risk, such as PrEP and ART, which demonstrated their HIV protection in studies completed about the time our data were

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collected, need to be included in risk reduction packages for serodiscordant couples desiring children.

All couples in our study had already experienced pregnancy at a time when they were aware of their HIV serodiscordant status and were receiving extensive counseling about HIV transmission risks, providing unique opportunities to explore motivation for conception among a highly informed population. Interviewing female and male partners separately allowed us to explore gendered responses, intra-couple and inter-couple differences, pregnancy decision making, and risk considerations. Future research among HIV serodiscordant couples presenting newly to care centers would be valuable to assess the acceptability and use of peri-conception risk-reduction strategies, including ART and PrEP, among couples desiring pregnancy, as well as motivations for couples who do not desire pregnancy.

Men and women in HIV serodiscordant partnerships in Kenya sustained a strong desire for childbearing. Like other work in this field, we found that fertility intentions were driven by complex internal and external factors that should be considered in the delivery of HIV prevention, family planning and safer conception services for this population (Crankshaw et al., 2012).HIV prevention programs can capitalize on the reported negotiation and mutual decision-making process to incorporate well-coordinated couples' based peri-conception risk reduction strategies into regular counselling programs.

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Table

Theme 1:	***Quotes***
Fertility intentions & motivations	***Deliberate intention to conceive*** *"… We just said even if we have the virus, we will still get the baby. I went and the coil [intrauterine device] was removed and I stopped using the condom." [IDI 23 year-old HIV- woman].* *"I was not using family planning but I didn't tell him because I heard he didn't want a child." [FGD HIV- women]* ***External pressure*** *"Someone is called a human being or a man because he has a child." [FGD HIV- men]* *"The mother of my husband is harsh. She keeps asking when she will be born [i.e. when she will be named]." [IDI 27 year-old HIV- woman].* ***Naming after immediate relatives*** *"You know that is our tradition in Kikuyu, and I feel it is good to give birth to my father and my mother* (i.e. to name)."[*IDI 28 year-old HIV- man].* ***Desire for biological children*** *"…she has her own. And she feels that is enough. She doesn't think about your own, and you know very well a man desires more of his own blood." [FGD HIV+ men].* ***Stability of the partnership*** *"…he tells you 'I will chase you and bring someone to bear children with'. It means because you are positive you can't bear children. I will bring one who is negative and she will give birth." [IDI 35 year-old HIV+ woman].* *"If she would have refused we would have separated… I took the medicine [oral contraceptives] and threw them in the toilet. I also threw the condoms." [IDI 43 year-old HIV+ man].*
Theme 2:	**Quotes**
HIV Risk Perceptions	***High risk perception but intention to not use condoms*** *"I feared but I asked God to help me because my intention was a child but I was very afraid." [IDI 27 year-old HIV- woman].* *"I was happy because I didn't think I could get pregnant and not acquire HIV." [IDI 23 year-old HIV- woman].* *"…my husband would refuse [the condom] and say 'just infect me'. So even if I try to convince him, you find that he doesn't want. So you also accept to do it that way [without a condom]. I don't feel well in my heart but I feel because he has said it I don't have anything to do except to do as he desires." [FGD with HIV-infected women].* ***Low risk perception*** *"I feel going with him* [sex] *for one day will not make him to be infected on that day." [IDI 35 year-old HIV+ woman].*
Theme 3:	**Quotes**
Peri-conception HIV risk reduction strategies	***Knowledge and challenges of fertility timing*** *"…even women not many understand it, (fertile period) someone just finds they are pregnant". [FGD HIV+ women]* ***Suspicion of assisted reproduction strategies*** *"That one [self-insemination] is good but my wife wouldn't accept…She says that is not from God" [IDI 28 year-old HIV- man]* *"You know this state of a woman sleeping with the man, that man will trust that child is his own, but this other one (artificial) I feel he can go and decide that this one is not my blood."[IDI 21 year-old HIV+ woman]*