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In the Absence of Marriage: Long-term Concurrent Partnerships, Pregnancy, and HIV Risk Dynamics among South African Young Adults

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Abstract

In KwaZulu/Natal, South Africa, where HIV prevalence is among the world's highest, a longitudinal qualitative study of partnership dynamics and HIV preventive behaviors was conducted. 47 young adults aged 18–24 participated in in-depth interviews, and 29 were re-interviewed two years later. Five analytical domains emerged: primary partnerships, love and romance; secondary partnerships; pregnancy/parenthood; condom use/prevention; and contextual influences, including schooling and future aspirations. Primary relationships were long-lasting, with most men and women in the same relationship at two-year follow-up. Secondary, casual partnerships were common for men and women, although these were shorter and changed frequently. Love and marriage aspirations were not viewed as incompatible with secondary partners. Condom use increased over time in some primary relationships, but decreased in others, and was nearly universal with non-primary partners. Pregnancy, school drop-out, and economic need strongly influence young people's lifecourse. These findings suggest the need to focus prevention efforts on the partnership context, including partner reduction, and structural factors that impede or enhance prevention success.

Keywords

concurrent partnerships; youth; South Africa; HIV risk; longitudinal

Introduction

'Concurrent partnering' refers to having overlapping relationships with more than one sexual partner at a time¹. Although the potential impact of concurrency on HIV transmission is clear based on the increased likelihood of exposure to infected partners², the role of concurrency in fueling sub-Saharan Africa's HIV epidemic is debated^{3–6}. A recent debate in the scientific literature underscores the lack of consensus^{4,6–10}. Some experts assign concurrency a paramount role in driving sub-Saharan Africa's HIV epidemic, while others argue more strongly for the likelihood of multiple, integrated causative factors^{4–10}. One thing most observers agree on is the need for further evidence, since relatively few studies have examined concurrent partnerships directly. A central point in the ongoing debate is the observation that partnership concurrency of long duration may be more common in sub-

Saharan Africa, where one-time casual encounters are less prevalent and the average duration of relationships is relatively long⁵. Yet relatively little empirical evidence supports this hypothesis^{11–14}, and few descriptive^{13,15,16}, qualitative^{12,17} or longitudinal¹⁸ studies have been conducted. Cross-sectional studies from various locations in sub-Saharan Africa show that about one-third to one-half of men (33–57%) report concurrent partnerships, as do a substantial minority of women (4–19%)^{11–16,17,18}.

Research on HIV and sexual partnerships demonstrates the multiple ways that sexual partnering patterns affect HIV infection levels: through partner age differences^{19–21}, number of partners^{11,22}, partner type^{12,16,17}, and economic factors, such as transactional sex²³. Young people with multiple partners face increased HIV risk¹¹, and some studies in sub-Saharan Africa have shown that as the number of lifetime partners increases, so does HIV prevalence²². Importantly, young women may choose male partners who are more likely to be infected – they may be working, and therefore able to support a girlfriend²³, but also more likely to have multiple partners, or they may simply be older partners with greater HIV risk^{19–22}, and with whom condom use is often less likely²³. Higher HIV prevalence among young women than among young men reflects high levels of unprotected sex within these overall patterns of partnership formation and sexual networking. Together, these patterns can substantially increase young women's risk of HIV acquisition^{24,25}.

Within South Africa's severe HIV epidemic, late adolescence and the transition to adulthood – 18 to 24 years of age – is a particularly high risk time for women, who experience some of the highest levels of HIV infection in the world^{22,25,26}. About one-quarter of women are HIV-infected by age 25, with prevalence in men peaking later, around age 30²⁶. Childbearing also increases rapidly during this time: although marriage generally occurs in the late twenties or later²⁴, about two-thirds of women have at least one child by age 25²².

A unique demographic feature of South Africa is the relative absence of formal marriage²⁷. With a median age of marriage of 26.8 years, only one quarter of adults aged 18 and above are married, and almost half of those aged 40–44 have never been married²⁸. By contrast, in much of sub-Saharan Africa, most women are married by the end of the teen years²⁹. Declining levels of marriage in South Africa's black population since the 1950s³⁰ reflect long-term disruptions in family life and entrenched labor migration³¹, as well as recent demographic trends²⁷. A later age at marriage has been associated with HIV infection at both individual and population levels²⁴. In settings like South Africa, where the period between sexual debut and formal marriage is extended, partnerships are more fluid, with frequent partner change and more casual partnering leading to higher HIV risk^{12,32}. Also, with many relationships characterized by distance and frequent separation, many young people are in long-term relationships with partners they see infrequently¹², and multiple partnerships are common³⁰. Men's multiple partnerships are often socially sanctioned or even encouraged by male peers^{15,16,33}, whereas young women's multiple partnerships may be hidden^{11,34}.

Sexual relationships are gendered, and women often lack the power to negotiate with whom they have sex, as well as when and how sexual interactions occur^{35,36}. Multiple vulnerabilities for HIV/AIDS^{37,38}, including sexual coercion³⁹, are compounded for younger women, whose prevention choices, such as condom use, are constrained^{40,41}, particularly in relationships with older men^{23,42}. Additionally, condoms are widely perceived to symbolize a lack of trust and intimacy⁴³, thus negating ideas of relationships as romantic and pleasurable. Further, although relationships are viewed as 'risky' from an epidemiological perspective, from a personal and romantic viewpoint they often are not⁴⁴. Accordingly, both women and men may choose not to raise the issue of condom use with partners^{40,42,43}. Finally, partnerships frequently have an economic basis, further

complicating the interrelationships between gender inequality, economic vulnerability, and sexual risk^{23,30,32,45}.

Insight into the sexual partnerships that occur in the absence of marriage is crucial to understanding the complexities of young people's HIV risk in South Africa. To date, very few studies have focused longitudinally on young people's sexual partnerships during the transition to adulthood, and this study offers the advantage of qualitative data collected via in-depth interviews with the same participants two years apart. This paper explores young people's sexual networking patterns with primary and secondary partnerships, and HIV risk dynamics, in the social context of rural KwaZulu/Natal, South Africa.

Data and Methods

Conceptual Framework

Script theory provided the conceptual framework for this study. 'Scripts' are culturally stereotyped sequential interactions between two people^{46,47}; script theory^{48,49} posits that these are influenced by the construction of gender, sexuality, and relationships at individual, relationship and cultural levels⁵⁰. In this analysis, the dynamic and changing nature of scripts is captured in the prospective construction of relationship narratives longitudinally, at the interpersonal (within relationship) and intrapersonal (within subject) levels. Further, overarching themes in these narratives – or scripts – represent potentially modifiable social processes, or intervention opportunities that reflect cultural meanings and social norms, which are important targets for behavioral change⁵¹.

Setting and Participants

The study was conducted in rural, northern KwaZulu/Natal, South Africa's most populous province, containing one-fifth of the country's population of 52 million. The study sub-district has a population of approximately 220,000, with black South Africans of Zulu ethnicity comprising 76 percent of the population. Socially conservative, this area is among the country's poorest regions⁵², experiences high out-migration for labor, and is the epicenter of South Africa's HIV epidemic. In 2008, nearly 50 percent of pregnant women – and 20 percent of all adults – in the province were HIV positive^{25,53}. Education is prolonged for many young people, and approximately 20 percent of youth attend school past age 18⁵².

The study was conducted in two of five secondary schools in the sub-district. All schools had similar characteristics, including classroom size, age and population distribution, and geographic catchments. The two study schools were purposively sampled, in consultation with local government and traditional authorities, in order to complement ongoing research and program activities. This method of selection was deemed most suitable for a qualitative investigation, particularly as the screening included sensitive topics such as relationship status. Following enumeration of classrooms, participants were recruited by announcements and distribution of fliers in grade 11 and 12 classrooms. Eligible participants were between 18 and 24 years, and currently in a sexually active heterosexual relationship of at least one month's duration. Study participants were 47 students attending the two schools (N=23 women and N=24 men). Men reported an average of 8.8 (SD = 10.0) lifetime partners, whereas women reported an average of 2.5 (SD = 1.2).

Interview Procedure and Training

The 76 in-depth interviews were part of a larger study of gender and HIV risk, including a three-week diary of daily interactions with sexual partners⁵⁴, and part of a five year ethnographic research project on young people and the social dynamics of HIV risk in rural KwaZulu/Natal^{34,35,41}. The interviews focused on participants' detailed descriptions of their

sexual relationships, preventive behaviors, and ongoing interactions. The first in-depth interview (Interview One, n=47) was conducted immediately after the diary data collection, and the second interview (Interview Two, n=29) was conducted, on average, two years later. Before Interview One, all participants provided informed consent, and were given explanations of confidentiality and research participants' rights. In addition to the semi-structured interview questions, participants provided demographic information and completed a short measure assessing sexual and relationship history. The interview guides were developed iteratively, in consultation with the study team and after initial interviews with several participants. All interviews were conducted in *isiZulu*, audiotaped, and then translated and transcribed into English using standard procedures⁵⁵. Interviewers were two local young women with secondary qualification, *isiZulu* as their primary language, fluency in English, and prior experience interviewing youth, along with additional training for this study.

Follow-up Sample

The follow up interviews (Interview Two) were conducted with 29 of the 47 participants (n=19 women; n=10 men). Of the 18 participants not interviewed a second time, seven could not be located. Another five were still enrolled in school, but not currently attending, and could not be located at their homes. Six others had left the area and could not be interviewed. Men were harder to trace than women, as they were more likely to have left the area to seek work.

In-depth Interviews

Interview One explored young adults' relationships and sexual interactions. Interview topics included relationship development, experiences of intimacy, decision-making, communication, gender and power in sexual and other interactions, and HIV prevention strategies in current relationships. The interview focused on participants' distinctions between primary and any existing secondary relationships across these dimensions. Interview Two was more structured, with participants asked to elaborate on relationship change and continuity over the past two years. Specific questions addressed the status of relationships with primary and secondary partners, changes in relationship meaning or goals, and preventive behaviors within each relationship. Any major life changes, including pregnancy, were also discussed.

Data Analysis

Data were analyzed with NVivo 7⁵⁶, which uses structured, hierarchical coding schemes to develop analytical matrices. First, primary coding categories were identified, and the range of themes within each category, to develop a structured coding scheme⁵⁴. With this coding scheme, transcripts were formally content coded. Full transcripts (general level) were used to retain the 'context', while illustrative quotes – or scripts - relevant to each theme (specific level) were extracted from transcripts. Coded text from each transcript was linked within common themes. When suggested by associations, overlap, or diversions in the data, thematic categories were refined through discussions with the coding team, and new codes added.

Reliability of the data was checked at several points during data collection and analysis, according to standard qualitative research procedures⁵⁵. During data collection, interviewers and researchers monitored the development of majority and minority viewpoints, and of typical scripts that reflected these. With the aim of achieving saturation, or redundancy, the frequency of these major themes were compared across interviews throughout the data collection process. During data analysis, the coding scheme was developed by 2–3 data analysts working with different transcripts, with the final coding scheme emerging, by

consensus, from common patterns in the data. Reliability of coding was checked by comparison of coding between two independent coders.

The coded data were analyzed in several ways. First, individual data patterns describe the range of participants' experiences and perspectives, including gender differences. Second, both *across* subject and *within* subject analyses were performed, to capture changes in participants' experiences across multiple time points. The across-subject analysis generated the five major analytical themes; these data are summarized in comparative tables by gender. Following that, the within-subject analysis compared each participant at the first and second interviews. Prospective relationship narratives – or scripts – were then constructed for each individual, to map relationship dynamics over time. Finally, a rank-count analysis of the frequency of outcomes in each domain provides a summary profile of the analytical themes⁵⁵.

Results

Major Analytical Themes

Five main themes were identified: 1) Primary Partnerships: Context of Love and Romance, 2) Secondary Partnerships, 3) Condom Use and Dynamics of Risk and Prevention, 4) Pregnancy and Parenthood, and 5) Other Risk Contexts.

Primary Partnerships of Young Women and Men

Given the eligibility requirement of being in a relationship of at least 1 month's duration when the study began, all men and women had a primary partner. Most relationships were long-term, with an average duration of 2 years for men, and 3.9 years for women. At two year follow up, 12 of 19 women and 6 of 10 men were still in a relationship with the same primary partner (Table 1).

The topics of love and romance featured prominently in discussions of primary partnerships. Both men and women associated their primary partnerships with love, trust and intimacy, and had great optimism regarding the future, including marriage. Participants' emphasis on marriage was striking, given the very low levels of formal marriage that exist, and the fact that few young people marry until the late twenties or after. The long duration of primary partnerships lent credibility to participants' claims of commitment to their partners, as well as the relationships' importance (Table 2, Supplemental Electronic Information).

By the second interview, about half of young women and several men had '*introduced their partner at home*', a reference to the ceremony (*izibizo*) in which families exchange gifts to signify commitment and public recognition of the relationship. Young people also spoke often of '*putting something down*,' referring to the initiation of bridewealth payments (*ilobola*), a formal step in the marriage process. While low rates of marriage suggest that many young people do not complete this process, marriage remains an important life aspiration. Most of the relationships of those who remained in the same primary partnerships from Interview One to Interview Two reflected greater commitment, as would be expected, as well as a greater focus by women and men on the development of formal engagement or marriage plans.

Secondary Partnerships

Despite the importance of their primary relationships, most men and women had secondary partners, although they were more common among men. At the first interview, almost all men (21/23) reported at least one other current partner. Secondary partnerships were less stable than primary partnerships. At the second interview, although 8 of 10 men indicated at

least one other partner, only three reported the same secondary partners. Although half of women reported secondary partnerships at the first interview, only 6 of 19 women had more than one partner two years later. Of those, only three were still involved with the same secondary partners (Table 1). While both men and women viewed secondary partnerships as casual and not associated with love or romance, these relationships were often of long duration, with a mean length of 1.4 years for women and 0.7 years for men.

Many women spoke of secondary relationships openly, in spite of the frequently expressed view that the primary partner was '*the one for me*', a statement that neatly captured the dominant script about primary partnerships for men and women (Table 2, Supplemental Electronic Information). The following is a typical script describing secondary partnerships, which was similar for women and men, except for men's frequent involvement with more than one casual partner:

R: We are very committed to our relationship both of us, as we might have a future together.

I: Future together in which way?

R: Although he has not put it point blank and has not given anything to my family, but I can see that he is preparing to pay *lobola* at home.

Later

I: Do you currently have any other partners ...?

R: Yes.

I: How many other partners do you have at this time?

R: One.

Even so, the women generally maintained relationship expectations in line with prevailing social norms about gender and relationships. Thus, even women who acknowledged a secondary partner often perceived this as 'not right', as one said, '*God did not make us to have two partners*'. Casual partners were a form of security, in case a primary relationship should break up, or during extended absences resulting from a boyfriend living elsewhere.

Although most respondents justified their secondary partners, the suspicion that a boyfriend had other partners – or the outright discovery of such a partner – was a primary source of relationship stress. Many women feared violence if their secondary partnerships were revealed (Table 2, Supplemental Electronic Information). In contrast, women often knew that men had other girlfriends. Some women actively discouraged their partners' concurrent relationships, while others accepted them, but ultimately sought other partners of their own.

For men, multiple partnerships symbolized a dominant male script of entitled freedom to 'look around' before settling down. For women, relationships with primary *and* secondary partners often provided important economic and emotional support. Secondary partners sometimes provided economic support when a primary partner lived far away, or if the relationship was not stable and the boyfriend was not providing adequately, and thus the dominant script for women about secondary partners reflected a sense of 'need' rather than 'desire', as with one young woman who said: 'he also gives me money to pay for my school fees from last year when my parents died'. Young women relied on partners for a range of economic needs, including school fees and basic household expenses. The economics of relationships were also important for young men, who needed funds in order to marry, or sometimes to support a child. Distance from partners, and infrequent contact, increased the

urgency behind perceived needs for multiple partners, both physically and socially, among men and women.

Even with secondary partnerships so common, some young people's narrative scripts emphasized partner reduction. For women, partner reduction meant having only one partner, whereas men thought they had reduced HIV risk by having fewer partners, but not only one. At two-year followup, only two men reported only one current girlfriend. Still, some changes were evident in overall attitudes toward casual partners between the first and second interviews, with increased recognition of the risks associated with multiple partners.

Dynamics of Risk and Prevention

Condoms were the main prevention strategy for men and women in both primary and secondary partnerships, although actual use depended on personal interpretations of risk and other factors. At the first interview, about half of men (10/23) and women (11/24) indicated that they 'always' used condoms in their primary partnerships, although the number of occasional users was higher (Table 1). In the follow-up interviews, half of men and one-quarter of women indicated they used condoms every time they had sex with their primary partners (Table 1). This decline in condom use among women in primary partnerships reflected the tendency toward less condom use in more established relationships, as well as sometimes conflicting objectives around HIV prevention and pregnancy.

Consistent condom users offered a script that reflected motivation to protect themselves and their partners, and understood that 'trust' was not an adequate prevention strategy. Of particular note, while many respondents initially said they 'always' used condoms, they later acknowledged that condom use with their primary partner was inconsistent. Others indicated that consistent condom use was difficult in certain circumstances, as when intercourse happened frequently. Among the few respondents - 5 women and 2 men - who reported never using condoms in primary relationships, most had assessed their risk, ultimately relying on 'trust' (Table 3, Supplemental Electronic Information). Through the follow-up interviews, patterns of condom use initiation and continued use were discerned, and also variation over a relationship's lifecourse. For some, condom use started at higher levels, then tapered off, again in relation to 'trust'. Sometimes, male partners made the decision to discontinue condoms on their own, leaving their girlfriends worried about risk. More commonly, men would make condom use decisions based on their perceptions of their girlfriends' HIV risk (Table 3, Supplemental Electronic Information). However, condom use increased over time within some relationships, often reflecting mutual commitment to the health of both partners. In general, attitudes toward condom use improved markedly between the first and second interviews, although levels of condom use were high throughout the study.

Secondary partnerships presented a very different picture. Both men and women reported nearly universal condom use in their casual partnerships, a finding that was consistent across both interviews. In part, this reflected greater perceived risk, as casual partners would likely have other partners. But young people also feared having an unplanned pregnancy. For young women's reputations, falling pregnant with a casual partner was widely perceived as disastrous (Table 3, Supplemental Electronic Information). The young men, although concerned about the responsibility an unintended pregnancy would bring, often discussed their casual girlfriends' 'risk' in terms of perceived promiscuity, a script that reflected gendered social norms regarding attitudes toward women's agency.

Pregnancy and Childbearing within Relationships

By the time of the follow up interviews, 15 of the 19 women had at least one child (Table 1). Because men reported inconsistently on whether they had fathered children, an accurate count of male respondents with children was not possible. However, fears of a girlfriend falling pregnant pervaded both the young men's and women's interviews. Most respondents who used condoms recognized that this was the most effective means available to them to prevent pregnancy. Experiencing an unplanned pregnancy with a casual partner, who was usually unknown to family and friends, was referred to as 'making a mistake'. In spite of the acknowledged HIV risks, the consequences of an unplanned pregnancy were seen as more salient, immediate and direct. Moreover, pregnancy was a reality for most young women in this study. When a young woman in a committed relationship did fall pregnant, the pregnancy was usually accepted by her and ultimately her family, if not by her boyfriend. Many young people report that the boyfriend of a pregnant girl often would not acknowledge their role in the pregnancy, occasionally disputing the claim of paternity, arguing that the girl likely had other partners. This finding is consistent with other studies of rural youth, which have described young men's reluctance to acknowledge paternity in relation to the payment of 'damages' (*inhlawulo*) to a girl's family, a culturally sanctioned form of compensation for impregnating a girl and 'stealing' her virginity^{57,58}. In spite of their stated desire *not* to fall pregnant, many of the young women and men did little to prevent pregnancy through consistent use of condoms or other effective contraceptive methods, which are generally not used prior to a first pregnancy due to fears about their impact on fertility⁵⁷. Although stated attitudes toward pregnancy did not shift among male or female respondents during the course of the study, in reality the high levels of pregnancy seem to belie some sort of tacit acceptance – or even unexpressed desire – for pregnancy within the context of a serious relationship.

Other Risk Contexts and the Economics of Relationships

Several important contextual factors strongly influenced both the initiation and continuation of young people's relationships. The difficulties in following up our sample after two years were indicative of the high levels of mobility in this rural area with limited economic and other opportunities, particularly among the young men. Young people move often for reasons that include work, employment, visiting family, attending a new school, or even living with different family members. Participants' relationships were similarly fluid: although relatively long-lasting, they were often conducted at a geographic distance. Infrequent contact between partners increased the opportunity for secondary partners. Many women, in particular, described even their primary partnerships as 'visiting relationships'. Although some respondents saw partners every weekend, longer separations were also common. Thus, the highly romantic relationships described by young people were, in reality, often conducted with limited physical contact.

Schooling was perhaps the most important life context for the participants, with completion of secondary school a paramount goal for young men and women, as this basic qualification is essential to enter the skilled job market. Reflecting the importance of this goal, 21 of 29 participants, all aged 20 or older, were still in school at the second interview. Another 5 had completed grade 12, while 3 had dropped out; only one was pursuing post-secondary training. An important script related to prevention was educational attainment as a reason to avoid pregnancy or other relationship commitments. Yet such goals were not always easily accomplished. Pregnancy was a frequent cause of interrupted schooling for young women. Other delays in schooling are also common, as young people may work to pay for school or to support other family members. Accordingly, the structural realities of young men's and women's lives and relationships often provided a sharp contrast to the life aspirations they articulated.

Discussion

These qualitative findings provide insight into the sexual partnerships – and their HIV risk dynamics – that occur in the absence of marriage among young adults in rural KwaZulu/Natal, South Africa. Some findings are encouraging: young people's ideas about prevention have advanced, particularly regarding condom use in committed relationships, but there is far less recognition of other prevention strategies, especially partner reduction. Far too many young people continue to base their prevention strategies on 'trust'. Long-term concurrent partnerships were prevalent in our sample, with nearly all male - and about half of female – participants reporting they had overlapping partnerships at some point during the two year study period. The long duration of both primary and secondary partnerships was unexpected - especially the high proportion of primary relationships ongoing at two year follow up - given the high levels of mobility and social disruption that characterize the lives of contemporary South African youth^{30,59}.

Of course, the exact nature of HIV risk depends not just upon partnership characteristics such as concurrency, but on levels of HIV infection within a sexual network, the number of partners, frequency of sexual contact, and relevant preventive behaviors^{2,6}. In this study, preventive behaviors – most notably condom use – were influenced most by partnership type, with many participants 'trusting' that their main partners would not put them at risk. In reality, the probability of a young South African woman becoming infected with HIV is high in *all* partnerships⁶⁰, making the assessment of risk according to 'trust' a very dangerous calculation. The finding that some young people have increased condom use over time in their primary relationships is highly encouraging, but not sufficient in situations in which condom use rates are in reality far lower than reported and long-term concurrent partnerships are common. Recent studies from other severely HIV-affected settings have also reported increasing condom use within committed relationships⁶¹, although studies in diverse settings have found that condom use tends to decline within stable, committed relationships over time^{62,63}, as seemed apparent in our study. The challenge is how to increase positive trends toward greater condom use through effective prevention messages, coupled with efforts to reduce numbers of partners.

The dominant scripts that emerged from this analysis provide some suggestions as to how effective prevention messages might be framed. For instance, positive attitudes toward condom use increased over the duration of our study, with many respondents noting that use of condoms signified love and respect for a partner. This script could be expanded to focus on the importance of 'protecting the one you love', i.e., primary partners, through partner reduction, or mutual monogamy, as well as condom use. At the same time, ideas about partner reduction are well understood, if nascent, and our findings regarding the levels of concurrency, multiple partnerships, and frequent partner change could be used to provide better information and education on these topics. Equally important was the emphasis by both men and women on love and marital aspirations, a finding that suggests room for health promotion messages related to building healthy and safe relationships, an area that is generally absent from HIV prevention programs. While many other studies of young people's partnerships in South Africa have focused on urban settings²³, these findings draw attention to the rural context of severe poverty and economic need that characterize young people's lives, echoing other work on rural women³⁰. An important aspect of the dominant script about love and marital aspirations is its seeming disconnection from the reality that fewer than half of South African adults are married, with marriage rates continuing to decline²⁷. One explanation may be that marriage based on love and romance represents a modern goal, one that may – like education – ultimately move them beyond the constraints of their rural environment. Yet the long-term but fluctuating non-marital relationships that

occur in a context of late marriage – or the absence of marriage – contribute greatly to young people's HIV risk²⁴.

The biggest contradiction in these findings – and the most difficult finding to understand – is the high levels of pregnancy, which occurred in spite of young people's often-stated desire to prevent pregnancy until schooling was completed and their futures more secure. Nationally, two-thirds of young South African women have a child by age 25, with a rapid increase in pregnancy between the ages of 18 and 21 years²², similar to the smaller sample studied here. Although earlier ethnographic research emphasized the traditional script of fertility as an important milestone for young women⁶⁴, more recent research supports the idea that young men and women are deeply concerned about pregnancy prevention^{57,58}. The high levels of pregnancy also have important implications for HIV risk. Pre-marital pregnancy increases young women's social and economic vulnerability^{30,65}, and HIV prevalence is extremely high – about 40 percent - among pregnant women under age 25⁵³. Attention to pregnancy prevention and sexual decisionmaking for women in this high risk age group should also be a top intervention priority.

While these qualitative findings cannot assess empirically the impact of partnering patterns on HIV transmission dynamics, the description of young people's partnerships and sexual networks – as well as their numerous contradictions - is itself an important contribution. Importantly, whereas most studies of sexual partnerships focus on partner age differences and the economic aspects of relationships, this study emphasizes the dynamics of partnerships themselves, and how young people give meaning to their lives and relationships. With regard to the current debate on the role of concurrent partnering in HIV transmission, these findings provide some further understanding of the high levels of concurrent relationships that exist among young South Africans, and the important role these relationships play in young people's lives. They also meet demands for further qualitative insights into how and why concurrency operates^{7,10}, and suggest the need for improved definition, study and measurement of the topic of concurrency. In reality, the selective prevention practices in relationships place young people at very high HIV risk, with the high pregnancy rates signifying much less consistent condom use than was reported. Further, young women's high pregnancy rates lead to a cycle of poverty, risk and social vulnerability, including economic dependence on boyfriends⁶⁵.

The strengths of this study lie in its exploration of the inherent complexities of young adults' relationships and prevention decisions, and by considering together the interrelated contexts of relationships, pregnancy, socio-economic vulnerabilities, and life aspirations, in relation to HIV risk. The main advantage of this study is the in-depth, longitudinal approach, which permitted a specific qualitative understanding of relationship trajectories and dynamics over time, based on within-subject analyses and the construction of prospective relationship narratives over two years. However, several important limitations also exist. The sample is small, with follow-up incomplete. The fact that young men were so difficult to locate is not surprising, given high levels of out-migration. However, attrition can introduce biases, even within a qualitative study. Further limitations include selectivity of the sample, including potential volunteer bias, and self-report biases possibly enhanced by respondents' participation in repeated interviews and assessments.

Recently, global policy makers have called for renewed efforts to reduce HIV transmission to young women in southern Africa^{59,66}. In spite of concerted prevention and research efforts over the past 15 years, the HIV epidemic in KwaZulu/Natal has stabilized, with no sign of significant reductions in incidence in young people to date²⁵. Few HIV prevention interventions have adequately addressed the partnership context of risk^{59,67}, with specific messages about reducing partner numbers, the risks of concurrent partnerships, including

long-term partnerships, and the need for consistent condom use even within committed relationships, where HIV risk is often mistakenly perceived to be low. Partner reduction has contributed to reductions in HIV prevalence in various settings^{68,69}, and should be given more attention as one aspect of a comprehensive HIV prevention approach – along with messages about the need for consistent condom use across partner types, and counseling about sexual and reproductive decisionmaking - in this setting. Further, most HIV prevention interventions include only brief mention of pregnancy⁷⁰. More broadly, recent intervention results in South Africa suggest the importance of addressing social and structural barriers to HIV prevention, including sexual coercion and economic vulnerability^{71,72}. As with qualitative studies elsewhere, these findings suggest scripts that could be important for the development of prevention messages that are culturally and developmentally relevant for this population^{73,74}, and which could be integrated into ongoing prevention programs or used to develop individually tailored prevention messages. In South Africa, where youth HIV incidence remains extraordinarily high, such context-specific HIV prevention interventions are an urgent priority.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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References

1. Garnett GP, Johnson AM. Coining a new term in epidemiology: concurrency and HIV. *AIDS*. 1997; 11(5):681–3. [PubMed: 9108951]
2. Morris M, Kretzschmar M. Concurrent partnerships and the spread of HIV. *AIDS*. 1995; 11(5):641–8. [PubMed: 9108946]
3. Epstein H. AIDS and the irrational. *BMJ*. 2008; 337:a2638. [PubMed: 19033334]
4. Mah TL, Halperin D. Concurrent sexual partnerships and the HIV epidemics in Africa: Evidence to move forward. *AIDS Behav*. 2008; 12 Epub ahead of print.
5. Halperin D, Epstein H. Concurrent sexual partnerships help to explain Africa's high HIV prevalence: Implications for prevention. *Lancet*. 2004; 364(9428):4–6. [PubMed: 15234834]
6. Lurie M, Rosenthal S. Concurrent partnerships as a driver of the HIV epidemic in sub-Saharan Africa? The evidence is limited. *AIDS Behav*. 2009 Jun 2. epub ahead of print.
7. Mah T, Halperin D. The evidence for the role of concurrent partnerships in Africa's HIV epidemics: a response to Lurie and Rosenthal. *AIDS Behav*. 10.1007/s10461-009-9617-z
8. Morris M. Barking up the wrong evidence tree. Comment on Lurie and Rosenthal, "Concurrent partnerships as a driver of the HIV epidemic in sub-Saharan Africa? The evidence is limited". *AIDS Behav*. in press.
9. Epstein H. The mathematics of concurrent partnerships in Africa's HIV epidemics: a response to Lurie and Rosenthal. *AIDS Behav*. 2009 Epub ahead of print. 10.1007/s10461-009-9627-x
10. Lurie MN, Rosenthal S. The Concurrency Hypothesis in Sub-Saharan Africa: Convincing Empirical Evidence is Still Lacking. Response to Mah and Halperin, Epstein, and Morris. *AIDS Behav*. 2009 Epub ahead of print.
11. Nnko S, Boerma JT, Urassa M, Mwaluko G, Zaba B. Secretive females or swaggering males? An assessment of the quality of sexual partnership reporting in rural Tanzania. *Soc Sci Med*. 2004; 59(2):299–310. [PubMed: 15110421]

12. Harrison A, Cleland J, Frohlich J. Young people's sexual partnerships in KwaZulu/Natal, South Africa: Patterns, contextual influences and HIV risk. *Stud Fam Plann.* 2008; 39(4):295–308. [PubMed: 19248716]
13. Sandøy IF, Dzekedzeke K, Fylkesnes K. Prevalence and correlates of concurrent sexual partnerships in Zambia. *AIDS Behav.* 2008 Oct 8.12 Epub ahead of print.
14. Reniers G, Watkins S. Ppolygyny and the spread of HIV in sub-Saharan Africa: a case of benign concurrency. *AIDS.* 2010; 24(2):299–307. [PubMed: 19890204]
15. Ferguson A, Pere M, Morris C, Ngugi E, Moses S. Sexual patterning and condom use among a group of HIV vulnerable men in Thika, Kenya. *Sex Transm Infect.* 2004; 80(6):435–39. [PubMed: 15572609]
16. Carter MJW, Kraft JM, Koppenhaver T, Galavotti C, Roels TH, Kilmarx PH, et al. 'A bull cannot be contained in a single kraal': concurrent sexual partnerships in Botswana. *AIDS Behav.* 2007; 11(6):822–30. [PubMed: 17295072]
17. LeClerc Madlala S. Cultural scripts for multiple and concurrent partnerships in southern Africa: why HIV prevention needs anthropology. *Sex Health.* 2009; 6(2):103–110. [PubMed: 19457288]
18. Helleringer S, Kohler HP, Kalilani-Phiri L. The association of HIV serodiscordance and partnership concurrency in Likoma Island, Malawi. *AIDS.* 2009; 23(10):1285–87. [PubMed: 19455016]
19. Gregson S, Nyamukapa CA, Garnett GP, Mason PR, Zhuwau T, Caraël M, et al. Sexual mixing patterns and sex-differentials in teenage exposure to HIV infection in rural Zimbabwe. *Lancet.* 2002; 359(9321):1896–1903. [PubMed: 12057552]
20. MacPhail C, Williams B, Campbell C. Relative risk of HIV infection among young men and women in a southern African township. *Int J STD AIDS.* 2002; 13(5):331–42. [PubMed: 11972938]
21. Kelly R, Gray RH, Sewankambo NK, et al. Age differences in sexual partners and risk of HIV-1 infection in rural Uganda. *J Acquire Immune Defic Syndr.* 2003; 32(4):446–51.
22. Pettifor AE, Rees HV, Kleinschmidt I, Steffenson AE, MacPhail C, Hlongwa-Madikizela, et al. Young people's sexual health in South Africa: HIV prevalence and sexual behaviors from a nationally representative household survey. *AIDS.* 2005; 19(14):1525–34. [PubMed: 16135907]
23. Leclerc-Madlala S. Age-disparate and intergenerational sex in southern Africa: the dynamics of hypervulnerability. *AIDS.* 2008; 22(Suppl 4):S17–25. [PubMed: 19033752]
24. Bongaarts J. Late marriage and the HIV epidemic in sub-Saharan Africa. *Pop Stud.* 2007; 61(1): 73–83.
25. UNAIDS. 2008 Report on the Global AIDS Epidemic. Geneva, Switzerland: UNAIDS; 2008.
26. Shisana, O.; Rehle, T.; Simbayi, L.; Mbelle, N. South African Medical Research Council. South African national HIV prevalence, HIV incidence, behaviour and communication survey. Cape Town: HSRC Press; 2005.
27. Hosegood V, McGrath N, Moultrie TA. Dispensing with marriage: Marital and partnership trends in rural KwaZulu-Natal, South Africa 2000–2006. *Demographic Rsch.* 2009; 20(13):279–312.
28. Department of Health. Republic of South Africa, Measure DHS/ORC Macro, South Africa Demographic and Health Survey 2003: Preliminary Report. Pretoria: Department of Health; 2004.
29. Mensch, B.; Singh, S.; Casterline, J. Trends in the timing of first marriage among men and women in the developing world. New York: Population Council; Working Paper No. 202;2005
30. Hunter M. The changing political economy of sex in South Africa: the significance of unemployment and inequalities to the scale of the AIDS pandemic. *Soc Sci Med.* 2007; 64(3):689–700. [PubMed: 17097204]
31. Marks S. An Epidemic waiting to happen? The Spread of HIV/AIDS in South Africa in social and historical perspective. *Afr Stud.* 2002; 61:13–26.
32. Dunkle KL, Jewkes R, Nduna M, Jama N, Levin J, Sikweyiya Y, et al. Transactional sex with casual and main partners among young South African men in the rural Eastern Cape: prevalence, predictors, and associations with gender-based violence. *Soc Sci Med.* 2007; 65(6):1235–48. [PubMed: 17560702]
33. Kapiga SH, Lugalla JL. Sexual behaviour patterns and condom use in Tanzania: results from the 1996 Demographic and Health Survey. *AIDS Care.* 2002; 14(4):455–69. [PubMed: 12204149]

34. Harrison A. Hidden love: Sexual ideologies and relationship ideals among rural South African adolescents in the context of HIV/AIDS. *Cult Health Sex.* 2008; 10(2):175–89. [PubMed: 18247210]
35. O'Sullivan LF, Harrison A, Morrell R, Monroe-Wise A, Kubeka M. Gender dynamics in the primary sexual relationships of young rural South Africans. *Cult Health Sex.* 2006; 8(2):99–113. [PubMed: 16641060]
36. Bhana D, Morrell R, Hearn J, Moletsane R. Power and Identity: An introduction to sexualities in Southern Africa. *Sexualities.* 2007; 10:131–9.
37. Susser I, Stein Z. Culture, sexuality and women's agency in the prevention of HIV/AIDS in southern Africa. *Am J Pub Health.* 2000; 90(7):1042–8. [PubMed: 10897180]
38. Jewkes RK, Levin JB, Penn-Kekana L. Gender inequalities, intimate partner violence and HIV preventive practices: findings of a South African cross-sectional study. *Soc Sci Med.* 2003; 56(1): 125–34. [PubMed: 12435556]
39. Dunkle KL, Jewkes RK, Brown HC, Gray GE, McIntyre JA, Harlow SD. Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *Lancet.* 2004; 363(9419):1415–21. [PubMed: 15121402]
40. MacPhail C, Campbell C. 'I think condoms are good, but aai, I hate those things': Condom use among adolescents and young people in a Southern African township. *Soc Sci Med.* 2002; 52(11): 331–45. [PubMed: 12144146]
41. Harrison A, Xaba N, Kunene P. Understanding safe sex: gender narratives of HIV and pregnancy prevention by rural South African school-going youth. *Repro Health Matters.* 2001; 9(17):63–71.
42. Varga CA. Sexual decision-making and negotiation in the midst of AIDS: Youth in KwaZulu/Natal, South Africa. *Health Trans Rev.* 1997; 7(Suppl 3):45–67.
43. Worth D. Sexual decision-making and AIDS: why condom promotion among vulnerable women is likely to fail. *Stud Fam Plann.* 1989; 20(6):297–307. [PubMed: 2623725]
44. Samuelsen H. Love, lifestyles and the risk of AIDS: the moral worlds of young people in Bobo-Dioulasso, Burkina Faso. *Cult Health Sex.* 2006; 8(3):211–24. [PubMed: 16801223]
45. Luke N. Age and economic asymmetries in the sexual relationships of adolescent girls in sub-Saharan Africa. *Stud Fam Plann.* 2003; 34(2):67–86. [PubMed: 12889340]
46. Ginsburg, GP. Rules, scripts and prototypes in personal relationships. In: Duck, SW., editor. *Handbook of Personal Relationships.* Chichester, UK: Wiley; 1988. p. 23-39.
47. Planalp S, Fitness J. Thinking/feeling about social and personal relationships. *J Soc Pers Relations.* 1999; 16(6):731–50.
48. Simon W, Gagnon JH. Sexual scripts: Permanence and change. *Arch Sex Behav.* 1986; 15(2):97–120. [PubMed: 3718206]
49. Simon, W.; Gagnon, JH. A sexual scripts approach. In: Greer, JH.; O'Donohue, WT., editors. *Theories of human sexuality.* New York: Plenum; 1987. p. 363-383.
50. Amaro H. Love, sex, and power: Considering women's realities in HIV prevention. *Am Psychol.* 1995; 50(6):437–47. [PubMed: 7598292]
51. VanWesenbeeck I, van Zessen G, Ingham R, Jaramazovic E, Stevens D. Factors and processes in heterosexual competence and risk: An integrated review of the evidence. *Psychol Health.* 1999; 14(1):25–50.
52. Statistics South Africa. Census 2001: Primary tables KwaZulu-Natal: 1996 and 2001 compared. Pretoria: Statistics South Africa; 2004.
53. Department of Health. Summary Report. Pretoria: Department of Health; 2008. Republic of South Africa, National HIV sero-prevalence survey of women attending public antenatal clinics in South Africa.
54. Hoffman S, O'Sullivan L, Harrison A, Dolezal C, Monroe-Wise A. HIV Risk Behaviors and the Context of Sexual Coercion in Young Adults' Sexual Interactions: Results from a Diary Study in Rural South Africa. *Sex Transm Dis.* 2006; 33(1):52–8. [PubMed: 16385222]
55. Bernard, HR. *Research Methods in Anthropology: Qualitative and Quantitative Approaches.* 4. New York: Altamira Press; 2006.
56. QSR International. NVivo 7. Doncaster, Australia: QSR International Pty Ltd; 2007.

57. Kaufman CE, deWet T, Stadler J. Adolescent pregnancy and parenthood in South Africa. *Stud Fam Plann.* 2001; 32(2):147–60. [PubMed: 11449863]
58. Varga CA. How gender roles influence sexual and reproductive health among South African adolescents. *Stud Fam Plann.* 2003; 34(3):160–72. [PubMed: 14558319]
59. Stirling M, Rees H, Kasedde S, Hankins C. Introduction: addressing the vulnerability of young women and girls to stop the HIV epidemic in southern Africa. *AIDS.* 2008; 22(S4):S1–3. [PubMed: 19033751]
60. Pettifor AE, Hudgens MG, Levandowski BA, Rees HV, Cohen MS. Highly efficient HIV transmission to young women in South Africa. *AIDS.* 2007; 21(7):861–5. [PubMed: 17415041]
61. Callegari L, Harper CC, Van der Straten A, Kamba M, Chipato T, Padian NS. Consistent condom use in married Zimbabwean women after a condom intervention. *Sex Transm Dis.* 2008; 35(6):624–30. [PubMed: 18545141]
62. Moyo W, Levandowski BA, MacPhail C, Rees H, Pettifor A. Consistent condom use in South African youth's most recent sexual relationships. *AIDS Behav.* 2008; 12(3):431–40. [PubMed: 18228125]
63. Anderson JE. Condom use and HIV risk among US adults. *Am J Public Health.* 2003; 93(6):912–4. [PubMed: 12773352]
64. Preston-Whyte, EM.; Zondi, M. Assessing illegitimacy in South Africa. In: Burman, S.; Preston-Whyte, E., editors. *Questionable Issue: Illegitimacy in South Africa.* Cape Town: Oxford University Press; 1992.
65. Grant MJ, Hallman K. Pregnancy-related school dropout and prior school performance in KwaZulu-Natal. *Stud Fam Plann.* 2008; 39(4):369–82. [PubMed: 19248721]
66. Laga M, Schwärlander B, Pisani E, Sow PS, Caraël M. To stem HIV in Africa, prevent transmission to young women. *AIDS.* 2001; 15(7):931–4. [PubMed: 11399966]
67. Pettifor AE, MacPhail C, Rees H, Cohen M. HIV and sexual behavior among young people: the South African paradox. *Sex Trans Dis.* 2008; 35(10):843–4.
68. Shelton JD, Halperin DT, Nantulya V, Potts M, Gayle HD, Holmes KK. Partner reduction is crucial for balanced 'ABC' approach to HIV prevention. *BMJ.* 2004; 328(7444):891–3. [PubMed: 15073076]
69. Stoneburner R, Low-Beer D. Sexual partner reductions explain human immunodeficiency virus declines in Uganda: comparative analyses of HIV and behavioural data in Uganda, Kenya, Malawi, and Zambia. *Int J Epidemiol.* 2004; 33(3):624. [PubMed: 15192050]
70. Harrison A, Smit J, Exner T, Hoffman S, Mantell J. Mpondombili Project: Gender Inequalities and Young People's Sexual Health in Rural South Africa. *Sexual Health Exchange.* 2004; (3/4):5–8.
71. Pronyk P, Hargreaves JR, Kim JC, Morison LA, Phetla G, Watts C, et al. Effect of a structural intervention for the prevention of intimate-partner violence and HIV in rural South Africa: a cluster randomised trial. *Lancet.* 2006; 368(9551):1973–83. [PubMed: 17141704]
72. Jewkes R, Nduna M, Levin J, Jama N, Kunkle K, Puren A, et al. Impact of stepping stones on incidence of HIV and HSV-2 and sexual behaviour in rural South Africa: cluster randomised controlled trial. *BMJ.* 2008; 337:a506. Epub ahead of print. 10.1136/bmj.a506 [PubMed: 18687720]
73. LeClerc-Madlala S. Cultural scripts for multiple and concurrent partnerships in southern Africa: why HIV prevention needs anthropology. *Sex Health.* 2009; 6(2):103–110. [PubMed: 19457288]
74. Maticka-Tyndale E, Gallant M, Brouillard-Coyle C, et al. The sexual scripts of Kenyan young people and HIV prevention. *Cult Health Sex.* 2005; 7(1):27–41. [PubMed: 16864186]

Table 1

Relationship Types, Parenthood Status, and Condom Use among Young Adult South African Women and Men aged 18–24: Rank-Order Analysis of Data from Semi-structured Interviews

	Interview 1 (N=47)		Interview 2 (N=29)	
	Women (N=24)	Men (N=23)	Women (N=19)	Men (N=10)
	N	N	N	N
Primary Relationship (y/n)	Participation required participants to be in an ongoing primary relationship		19	10
Primary Relationship				
Same			12	6
New			7	4
Secondary Relationship	12	21	6	8
Same	--	--	3	3
New	--	--	3	5
Parenthood Status (1 child at time of interview)	12	1	15	n/a ¹
Preventive Behaviors (in Primary Partnerships)²				
Condom Use, Consistent	11	10	5	5
Condom Use, Occasional	12	12	9	3
No Condom Use	1	1	5	2

¹ Data on pregnancy/fatherhood among young men are not available due to inconsistent reports in the interviews.

² Condom use was reported as nearly universal by men and women in secondary partnerships. Because of this, disaggregation according to frequency of use is not possible, and so data on frequency of condom use are presented only for primary partnerships.