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Marital Aspirations, Sexual Behaviors, and HIV/AIDS in Rural Malawi

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Abstract

We explore how marital aspirations are related to the sexual behaviors of adolescents and young adults in Malawi, where HIV/AIDS prevalence among adults exceeds 10%. We also consider whether the specter of AIDS is shaping ideals about marriage. By combining survey data (N = 1,087) and in-depth interviews (N = 133) with young Malawians from the Malawi Diffusion and Ideational Change Project, we show that looking for and finding a suitable spouse are linked to sexual behaviors and, thus, HIV risks. Moreover, concerns about contracting HIV are closely tied to the ideal characteristics of a future spouse. Our findings draw long-overdue attention to the importance of marital aspirations in understanding adolescent sexual behaviors and risks in the era of AIDS.

Keywords

HIV/AIDS; marital aspirations; sexual behaviors; sub-Saharan Africa

Around the globe, adolescence through early adulthood is a period of rapid change. Adolescents and young adults typically undergo several key transitions, including completing schooling, finding jobs, getting married, and initiating childbearing (National Research Council and Institute of Medicine, 2005). When adolescents and youths in sub-Saharan Africa make these transitions, however, they face the additional challenge of doing so while endeavoring to avoid contracting HIV. This is particularly true in countries like Malawi, where HIV/AIDS prevalence among adults exceeds 10% (UNAIDS, 2008). Discovering HIV-free pathways to adulthood is of paramount importance not only to policymakers and health professionals but also to adolescents themselves. Yet few researchers have sought to understand how these transitions may shape HIV risks over the life course.

Life Course Theory and Adolescent Sexual Behaviors

In this paper, we draw on the developmental life course perspective to explore how adolescent sexual behaviors in sub-Saharan Africa may be related to a pivotal life transition, marriage. Developmental life course theory as articulated by Elder (1994, 1998) offers a useful framework to explore how adolescents chart their life trajectories and how their current behaviors relate to both past experiences and future ambitions. Two of the theory's four principles are especially germane to our research. First, developmental life course theory focuses on the role of *human agency*, meaning that “individuals construct their own life course through the choices and actions they take within the opportunities and constraints of history and social circumstances” (Elder, 1998, p. 4). Second, the theory emphasizes the importance

of path dependence, that is, the cumulative influence of *historical time, place, and events* in shaping the life course of individuals.

Turning first to the principle of human agency, we address its relevance to marital outcomes. Although subject to considerable external constraints, individuals' *marital aspirations*, which reflect their hopes and desires with respect to when they will and whom they want to marry, and their *marital expectations*, which indicate what they think is most likely to occur, are potentially important. Developmental life course theory suggests that adolescents adjust their current behaviors, particularly their sexual behaviors, in ways that would help achieve these aspirations and expectations. Several studies that either explicitly or implicitly invoke life course theory have shown that marital aspirations are important, even central, in many adolescent sexual relationships in North America (Crissey, 2005; Manning, Longmore, & Giordano, 2007; Thornton, 1990). Two specific relationships have been found. First, the age at which adolescents want or expect to marry is related to their current types of relationships. One study, for example, found that teens who expected to marry before the age of 25 were more likely to be involved in serious—often sexual—relationships (Crissey). Second, wishing to marry a particular partner is correlated with sexual behaviors within that partnership. Thornton and Freedman (1982), in their Detroit study, found that adolescents who intended to marry their current dating partner were more likely to be sexually active, had sex more frequently, and reported greater partner exclusivity. These studies suggest that both wanting to get married in the near future and having found a potentially suitable spouse are linked to current adolescent sexual behaviors.

In contrast to the literature on North America, most of the sociological, demographic, and epidemiological research on adolescent sexual behaviors in sub-Saharan Africa focuses on so-called risky sexual behaviors and how they relate to HIV risks. Marital aspirations receive scant attention in this literature (Magruder, 2007). Instead, other motivations for engaging in pre-marital sex such as peer pressure, sexual gratification, social status and obligation, and financial or material gain are most commonly noted (Dunkle et al., 2004; Luke, 2005; Poulin, 2007). The lack of emphasis on marital aspirations and their potential links to premarital sexual behaviors may reflect the long-standing dominance of parents and kin in determining when and whom young people would marry. Yet across subSaharan Africa, there has been a pronounced shift away from these more traditional marriage practices toward individual preferences (Mukiza-Gapere & Ntozi, 1995; Smith, 2000). This shift is consistent with the notion of *individualization* of the life course, whereby men and women begin to exercise more agency in the creation of their life trajectories as traditional constraints are relaxed (Shanahan, 2000). As a consequence, adolescents and young adults have become increasingly responsible for finding their own marital partners.

At the same time that adolescents are exercising greater autonomy in their marriages, historically unprecedented events are unfolding that may be shaping these choices. In nine African countries, between 10% and 25% of the adult population currently has HIV/AIDS (UNAIDS, 2008). Given the intimate ties between marriage, sexual behavior, and HIV/AIDS, an epidemic of this magnitude is likely to shape marital patterns and trajectories. Exactly how such patterns will be altered, however, remains unknown.

In this paper, we therefore take a developmental life course perspective to better understand the links among adolescents' marital aspirations, their sexual behaviors, and HIV/AIDS in Malawi, where an estimated 11.9% of adults are infected (UNAIDS, 2008). Using both survey data and in-depth interviews, we first examine whether the marital aspirations of adolescent Malawians are linked to their current sexual behaviors. Given the findings from North America, we ask (a) are marital aspirations related to the formation of pre-marital sexual partnerships and (b) do adolescents engage in different sexual behaviors with their fiancées (i.e., partners

they wish to marry) than with other sexual partners. We then ask whether concerns about AIDS are, in turn, shaping marital aspirations. Before turning to these questions, we offer a brief justification for our emphasis on the marital transition by examining gender differences in HIV prevalence among adolescents.

The Marital Transition and the Gender Gap in HIV Prevalence

Although several life transitions are likely to have important implications for HIV, we focus on the transition to marriage for two reasons. First, there is an intimate and direct connection between marriage and sexual behaviors; not only does being married virtually always mean being sexually active, but also premarital decisions about sexual behaviors—such as whether and how often to engage in sex, whether or not to use protection, and so forth—are deeply connected to whether or not relationships culminate in first marriage. Second, gender differentials in the age of first marriage are mirrored by gender differentials in HIV prevalence by age.

Most countries experiencing HIV/AIDS epidemics with adult HIV prevalence rates exceeding 5% exhibit a now familiar pattern: Prevalence rates are two to eight times higher for women ages 15 to 24 than for men in this age group (Laga, Schwartlander, Pisani, Sow, & Carael, 2001). In Malawi, the HIV prevalence rate of 3.7% among women ages 15 to 19 climbs to 13.2% among those 20 to 24 years old. For men in these same age groups, prevalence increases only from 0.4% to 3.9%, respectively. Peak prevalence rates for men do not occur until their mid-30s, when they reach about 20% (National Statistical Office and Macro, 2005). Thus, the onset of AIDS tends to occur at a much younger age for women than for men. Women in sub-Saharan Africa also tend to marry at substantially younger ages than men. In Malawi, for example, women marry almost 5 years earlier than men (median age of 18.0 for women vs. 22.9 for men; National Statistical Office and Macro).

Several plausible explanations for the large difference in HIV prevalence by gender have been proposed. These include (a) gender inequalities with respect to social, cultural, and economic conditions (Gilbert & Walker, 2002; Türmen, 2003), (b) the practice of “age mixing,” whereby young women tend to have much older sexual partners (Gregson et al., 2002; Kelly et al., 2003), and (c) women's greater biological susceptibility, although this explanation has been questioned in the African context (Carpenter, Kamali, Ruberantwari, Malamba, & Whitworth, 1999; Hugonnet et al., 2002; Mastro & Vincenz, 1996). None of these explanations alone, however, has proven fully satisfactory. Gender differences in the timing of first marriage may be another important piece of the puzzle. Several studies have found that married young women have much higher rates of HIV/AIDS than unmarried women of the same age (Glynn et al., 2001; Kelly et al.), leading some to argue that early marriage may pose a substantial risk with respect to HIV (Clark, 2004; Clark, Bruce, & Dude, 2006). Others argue that it may not be marriage per se but rather the process leading up to it, particularly searching for a suitable spouse, that generates risk (Magruder, 2007).

Marital Aspirations and Sexual Behaviors

To explore the possibility that the process of marriage is tied to HIV risks, we examine both the theoretical and empirical links between marital aspirations and sexual behaviors. We rely on two measures of marital aspirations: (a) the desired age of marriage (if ever) and (b) intentions to marry particular sexual partners (i.e., being engaged). We posit two specific relationships between marital aspirations and sexual behaviors. First, we argue that the desire to become married provokes a search for a suitable marital partner and is thus a key motivation for establishing premarital sexual relationships. Second, we contend that couples who intend to marry will engage in different sexual behaviors than couples without marital intentions. To the extent that either the desire to marry is associated with the formation of new sexual

partnerships or engaged couples engage in risky sexual behaviors with each other, the process of finding a suitable spouse and getting married could elevate HIV risks.

Young men and women in sub-Saharan Africa, as elsewhere, may form premarital sexual relationships in the hopes of finding a suitable spouse. Engaging in premarital sex is, of course, by no means a necessary precursor to marriage. Indeed, in light of an ongoing AIDS epidemic, virginity at the time of marriage may become increasingly important. For other adolescents, however, engaging in sexual activity may be integral to the dating and courtship process preceding marriage. Sexual intercourse itself may be viewed as a signal of greater intimacy, trust, and commitment. An estimated 72% of men and 38% of women in Malawi will have engaged in premarital sex before reaching their 20th birthday (Munthali, Chimbiri, & Zulu, 2004). As the age of marriage for women rises, the percentage of women who are sexually active before marriage is expected to increase (Mensch, Grant, & Blanc, 2006). To the extent that initiating sexual activity occurs as a prelude to marriage, we would expect that if young women or men wanted to marry in their near future, they would have an increased likelihood to (a) become sexually active, (b) have a current or recent sexual partner, and (c) increase the total number of sexual partners.

Once individuals have found a suitable potential spouse, they may engage in different sexual behaviors with this sexual partner than with others. Critical sexual behaviors with respect to HIV/AIDS risks such as use of condoms, frequency of sexual contact, and sexual exclusivity may be related to whether a particular sexual partner is perceived to have marriage potential. On the one hand, condoms may be viewed as acceptable with casual partners, but unacceptable with more serious partners, who may view condom use as indicating a lack of trust (Chimbiri, 2007; Civic, 1999; Muhwava, 2003). Similarly, logistical considerations may limit sexual contact with girlfriends, whereas sexual contact with wives is usually much higher (Clark et al., 2006). Both of these factors—decreased condom use and increased frequency of sex—substantially increase the probability of HIV transmission from an infected partner (Laumann, Gagnon, Michael, & Michaels, 1994). On the other hand, men and women may expect greater levels of sexual exclusivity from the partners they plan to marry than from partners they are merely dating (Caraël, Ali, & Cleland, 2001). Some have argued, however, that extramarital sexual relationships are widely tolerated for men in many parts of sub-Saharan Africa (Caldwell, 2000; Orubuloye, Caldwell, & Caldwell, 1997). Thus, marriage itself may offer little extra protection to women via greater sexual exclusivity of their spouses.

Other Predictors of Adolescent Sexual Behaviors

The AIDS epidemic has spurred considerable research on heterosexual adolescent behaviors in sub-Saharan Africa over the last two decades. Most of this research has focused on so-called risky sexual behaviors such as early sexual debut, failure to use condoms, and having many or concurrent sexual partners. A handful of covariates, including age, socioeconomic status, educational attainment, urban and rural differentials, ethnic identity, and regional differences, have received considerable attention. Yet there is little consensus about their relationships to sexual behaviors. For every general relationship, there are strong contradictory findings.

Age has arguably the most straightforward relationship to sexual behaviors and is included in nearly all studies. Not surprisingly, age is positively correlated with initiating sexual activity, total number of sexual partners, and (in most studies) using condoms at last intercourse (Munthali et al., 2004). Age, however, is generally added as a control variable and treated as a measure of exposure rather than as a marker of development. Perhaps the variable that has received the most attention is socioeconomic status, especially poverty. The common assertion that poverty causes AIDS has generated heated debates. There are strong reasons to think that poverty drives young women to have transactional sex, thereby decreasing their age of sexual debut, increasing their total number of sexual partners, and undermining their ability to use

condoms (Whiteside, 2002). This argument is upheld in some empirical studies (Dodoo, Zulu, & Ezeh, 2007), but not others (Booysen & Summerton, 2002). For men, there is a clear positive association between wealth and total number of sexual partners, possibly because wealthier men can afford more partners (Mishra et al., 2007).

Educational attainment, which is closely tied to wealth, also exhibits a complex relationship to sexual behaviors and HIV status. Evidence from Uganda suggests that in the early years of the HIV epidemic those with the most education made up a disproportionate share of HIV cases. Currently, the least educated are most likely to be infected, presumably because education has fostered behavioral changes such as reducing total number of sexual partners and increasing condom use (de Walque, 2006; de Walque, Nakiyingi-Miiro, Busingye, & Whitworth, 2005). The effects of educational attainment, however, may differ from those of current school enrollment. Currently attending school strongly deters both male and female adolescents from forming sexual partnerships. Emerging evidence documents that some girls strategically avoid “serious” relationships with boys for fear of being distracted from their studies (Poulin, 2006). Either a pregnancy or a marriage is likely to end girls' schooling and is often disruptive of boys' education as well.

Finally, ethnicity, region, and urban residency are often used as proxies for what Eaton, Flisher, and Aaro (2003) refer to as the distal context, namely cultural and structural factors that influence sexual behaviors. Some researchers have argued that specific ethnic customs such as matrilineal kinship systems, initiation ceremonies, and widow inheritance contribute to the transmission of HIV, but it is likely that broader social norms governing the acceptability of sexual behaviors like age of sexual debut and number of premarital and extramarital sexual partners play a larger role in determining HIV risks (Gausset, 2001). These social norms are highly correlated with region. In the case of Malawi, there are clear differences in sexual behaviors and HIV rates by region. The northern region is predominately Protestant and has patrilineal kinship structures. The largest ethnic group is the Tumbuka. Adolescents and adults living in the northern region exhibit more conservative sexual behaviors, with a relatively old age of sexual debut (17.7 for women and 18.8 for men) and fewer total lifetime sexual partners (National Statistical Office and Macro, 2005). In the southern region, the matrilineal marital customs of the Yao, who are primarily Muslims, coincides with lower ages of sexual debut (16.7 for women and 18.3 for men) and far larger numbers of lifetime sexual partners (National Statistical Office and Macro). Some part of these higher numbers of sexual partnerships may be attributed to the much higher rates of divorce and remarriage, which may be more acceptable in a matrilineal society (Reniers, 2008). Moreover, residents of southern Malawi tend to be less educated and poorer than those living in the north, leading to higher levels of migration. Perhaps not surprisingly, HIV/AIDS prevalence in the southern region is 17.6%, compared to 8.1% in the northern region (National Statistical Office and Macro). The central region, comprised mainly of members of the Chewa ethnicity, reflects a mix of the other two regions with, for example, some families following maternal and others paternal lineage systems.

Differences in urban and rural residency often mark the starkest geographic differences, with HIV prevalence rates typically higher in urban areas. Although most research on adolescent sexual behaviors in sub-Saharan Africa, like our study, is conducted in either an urban or a rural setting, making direct comparisons rare, life in the cities is generally associated with younger age of sexual initiation and greater numbers of sexual partners for both men and women (Dodoo et al., 2007).

Concerns About HIV/AIDS and Marital Aspirations

In the final introductory section of this paper, we briefly discuss whether the AIDS epidemic is altering marital aspirations—specifically, which individuals are viewed as ideal spouses and whether and when to marry. Young women in Uganda report that their fear of HIV/AIDS has

"poured cold water" on the institution of marriage, leading some individuals to forsake marriage altogether (Mukiza-Gapere & Ntozi, 1995). For others, concerns about HIV/AIDS may affect when young people choose to marry (Bongaarts, 2007; Bracher, Santow, & Watkins, 2003; Clark, 2004; Clark et al., 2006). People who believe that marriage will offer relative safety from the deadly virus may choose to marry earlier. In contrast, those who fear becoming infected by their spouse may choose to delay marriage. Finally, many individuals realize that their spouse will be their primary lifetime sexual partner and believe that careful selection of this person may help them avoid acquiring HIV. In response to the AIDS epidemic, characteristics of the ideal spouse may therefore be changing. For example, in the absence of AIDS, older and wealthier men might be considered preferable husbands, but concerns about HIV risks may diminish their appeal.

Method

Integrating In-Depth Interviews and Survey Data From Malawi

To explore the relationships between marital aspirations, sexual behaviors, and HIV concerns, we draw upon survey and in-depth qualitative interviews from young married and unmarried men and women ages 15 to 24 in rural Malawi. Survey data were collected in 2004 and come from three rural sites, in southern (Balaka), central (Mchinji), and northern (Rumphi) Malawi. At roughly the same time as the survey data were collected in 2004, in-depth interviews were conducted in Balaka and Rumphi. Although financial constraints prohibited gathering qualitative interviews in Mchinji, given that the greatest contrasts exist between the north and the south of Malawi (see above), a broad spectrum of Malawian experiences is captured in our qualitative interviews. Previous analyses show that the qualitative sample matches the survey sample well on key background characteristics (Poulin, 2006).

Survey data used in our analyses come from the third wave of the Malawi Diffusion and Ideational Change Project (MDICP-3) conducted in the summer of 2004. The MDICP is a longitudinal study begun in 1998 by investigators at the University of Pennsylvania and the University of Malawi's College of Medicine. The third wave (MDICP-3) included, for the first time, a sample of both unmarried and married women and men aged 15 to 24. A total of 501 young men (393 never married and 108 ever married) and 586 young women (252 never married and 334 ever married) were interviewed. Given that men tend to marry at significantly older ages than women, young married men and older unmarried women were oversampled. The relative sampling by respondents' age and marital status differed by region (also reflecting differences in marriage patterns; see www.malawi.pop.upenn.edu for sampling procedures). To account for these sampling procedures, weights that reflect the probability of selection into the sample by marital status and age within each region are used in the descriptive statistics.

We also draw heavily upon qualitative information, consisting of in-depth interviews from a randomly drawn subsample (N = 133) of the list of survey respondents. These in-depth interviews focused on six general topics, including three that are relevant for the present inquiry: partnership beginnings and endings, sexual behaviors, and marriage values and expectations. Married respondents were asked about current spouses as well as any premarital partners. The topic ordering was left to trained interviewers, who were matched with respondents by gender and age to increase respondents' comfort level (an important goal given the sensitivity of the subject of sexual behavior). The in-depth interviews were conducted in the respondent's local language and were immediately translated into English and transcribed in the field. Transcripts were subsequently entered into the qualitative software program Nvivo (Version 7) to facilitate the analyses of the qualitative data. All text was read and reread to systematically identify broad themes (or patterns) and coded in Nvivo accordingly. The codification and analytic process involved the use of themes fixed prior to systematic data collection, but new themes were also coded and incorporated. In all, 33 broad themes were

identified and, of these, the following were further analyzed: preferred characteristics of spouses, reasons given for marrying, motivations for ending partnerships, duration of partnerships, and premarital courtship practices. The quotes provided in this article are representative of the common narratives distinguished within these more specific themes. Although we corrected grammatical mistakes, we otherwise retained the original English translations as provided by the interviewers.

These complementary quantitative and qualitative data allow us to use a mixed-method approach not only to examine general patterns of premarital and marital partnership and sexual behavior, but also to validate and explore these findings further using individuals' perspectives and outcomes pertaining to such partnerships. As noted above, there are stark differences both in men's and women's life trajectories and in social norms governing their sexual behaviors. We therefore examine these groups separately (Giordano, Longmore, & Manning, 2006; Goldscheider and Waite, 1986).

Dependent Variables

We analyze two distinct sets of sexual behavior outcomes. The first set pertains to measures of partnership formation: (a) becoming sexually active, (b) having a current or recent sexual partner, and (c) the total number of sexual partnerships. In our never-married sample, we find that 70.2% of male respondents and 44.7% of female respondents report having ever been sexually active (Table 1). Unmarried men are also more likely than unmarried women to report having had sex in the last year and having had more lifetime sexual partners.

In our second set of analyses, we assess sexual behaviors within different partnership types. Detailed information was given by both never-married and ever-married respondents on up to two of their most recent sexual partnerships. This information included the frequency of condom use, the frequency of sexual intercourse, self-reported concurrent sexual partners, and suspicion of infidelity about their sexual partners. In total, men reported on 550 sexual partnerships and women provided information on 470 partners. Respondents were asked a series of questions about condom use within each relationship. For our analyses, we rely on the question “In general, with what frequency did you use a condom with this partner?” (1= *never*, 2 = *at the beginning*, 3 = *sometimes*, 4 = *almost every time*, and 5 = *every time*). We created a dichotomous variable for *usually used condoms*, which equaled 1 for values 4 and 5 and 0 otherwise. Respondents were also asked “In general, with what frequency did you have sex with this partner?” (1 = *more than three times per week*, 2 = *a couple times per week*, 3 = *a couple times per month*, and 4 = *less than twice per month*). Our dichotomous variable indicates whether the couple had sex two or more times per week. Finally, all respondents were asked whether they had had other sexual partners or thought their partner had had other sexual partners during their relationship. Because respondents were asked to conjecture about their partners' other sexual partners, they were allowed to answer “don't know” in response to this question. For nearly a quarter of all partnerships (111 for women and 130 for men), the respondents reported not knowing whether their partner had had other partners. These partnerships were subsequently dropped from the analyses of partner's infidelity. In all our multivariate analyses of these partnership-level sexual behaviors, we cluster by respondent to adjust for dependence in reporting of sexual partners by the same respondent.

Our dependent variables on sexual behaviors rely on sensitive self-reported information, which is susceptible to misreporting. In particular, it is believed that men tend to overreport, whereas women may underreport sexual behaviors (Nnko, Boerma, Urassa, Mwaluko, & Zaba, 2004). In our study, efforts were made to improve reporting of sexual partnerships by first asking respondents, without a prior filtering question, how old they were when they first had sex. Respondents who reported that they had ever had sex were then asked a series of questions to

probe about whether they had ever had sex with specific partners (i.e., fiancés, boyfriends, strangers).

Measuring Marital Aspirations

In correspondence to each set of dependent variables, we use two distinct measures of marital aspirations. In our first set of analyses, we examine whether the desire to become married in the near future affects the formation of sexual partnerships by using a measure of how close individuals are to their ideal age of marriage. Unmarried male and female respondents were asked whether they wanted to get married. Those answering in the affirmative were then asked, "At what age would you like to get married?" For these respondents, we created a measure of marital aspirations by subtracting current age from desired age at marriage. The average desired time until marriage was about 4.5 years for unmarried women and 6.7 years for unmarried men. We coded this variable into the following categories: 0 – 1 year, 2 – 3 years, 4 – 5 years, and more than 5 years before their ideal age of marriage. We refer to this measure as marital aspirations rather than marital expectations as it reflects how close men and women are to the age at which they *want* to marry, rather than when they expect to marry. It is interesting that a relatively high proportion of unmarried female (16.6%) and some unmarried male (7.6%) respondents stated that they did not want to get married. These were assigned to a separate category.

In our second set of analyses, we examine whether couples in different types of partnerships engage in different types of sexual behaviors. Sexual partners were classified as spouses, fiancé(e)s, steady boyfriends or girlfriends, or casual partners (including one-night stands and infrequent and uncommitted relationships). Spouses comprised a much higher proportion of all young women's reported sexual partnerships (66.4% for women vs. 18.8% for men). Men were more likely to classify their sexual partners as steady or casual. Both men and women described less than 10% of all their recent partners as fiancé(e)s. Unfortunately, the survey limited its questions to sexual partners and did not ask about nonsexual partners, such as engaged couples who had not had sex. Thus, we cannot determine whether there is variation in being sexually active by type of partnership, but only whether there are differences in types of sexual behavior among sexually active couples.

Other Independent Variables

Our regression models control for several important respondent characteristics thought to be correlated with adolescent sexual behavior, including age, educational attainment, current school enrollment, economic status, and region of the country. Age is included as a continuous variable from ages 15 to 24. Educational attainment is measured by respondents' highest level of completed education to date (≤ Standard 8 is coded as *primary school* and ≥ Form 1 is coded as *secondary school*). Current school enrollment is a dichotomous variable indicating whether the respondent is currently a student. More than half of unmarried respondents of both sexes in our sample were currently in school at the time of the survey. To measure economic status, we developed a measure of household wealth using a principal component analysis of key assets including type of roofing material (metal or thatch), source of water (river/lake, open well, covered well, borehole, or piped), and type of toilet (pit latrine or other) as well as ownership of a bicycle, oxcart, and pieces of furniture (bed, mattress, sofa, table and chairs; Filmer & Pritchett, 2001). Assets owned by less than 5% of our sample were excluded. According to this asset index measure, respondents are classified as poor (representing the lowest third of households), middle, and rich (representing the top third of households). Overall, our measure of economic status was not very sensitive to the inclusion or exclusion of specific assets. Although the use of asset indices as measures of socioeconomic status has important limitations, it remains the most commonly used indicator in low-income countries (Howe, Hargreaves, & Huttly, 2008).

Finally, we incorporate region into our model as a proxy for a host of cultural, ethnic, religious, and geographic factors that could affect sexual practices. Religious affiliation and ethnic identity are never independently statistically significant predictors of sexual behaviors once region has been accounted for and are, therefore, excluded. In our second set of analyses on sexual behaviors within partnerships, we expect that duration of sexual partnership is an important factor governing sexual behaviors. Unfortunately, our measures of relationship duration are inadequate to properly assess its effect.

Models and Analytic Strategy

We employ logistic regressions for all our dichotomous measures of sexual behaviors and negative binomial regression to model the total number of sexual partners. Likelihood-ratio tests of alpha in our negative binomial regressions are statistically significant in all but one model, suggesting that outcome measure exhibits overdispersion, and Poisson models are inappropriate. Odds ratios are reported for logistic regressions and incidence rates ratios are given for count models. Because we are especially interested in disentangling the effects of age from marital aspirations, our first model includes only measures of marital aspirations, and our second model adds in age. In our final model, we include selected socioeconomic variables.

Our weights were developed to account for different sampling strategies between married and unmarried men and women, so they are not used in the multivariate analysis presented in Tables 2 and 3, which are limited to unmarried respondents and run separately for men and women. Weights were also not used in the multivariate analysis of sexual partnerships (Tables 4 and 5) as all regressions control for age, marital status, and region, and regressions are run separately for men and women. When weights are employed in our models of sexual partnerships, we find similar results with the exception that women are no longer significantly more likely to suspect their casual partners of having other partners ($p = .06$).

Results

Are Marital Aspirations Related to the Formation of Premarital Sexual Partnerships?

To better understand the role of marital aspirations with respect to adolescent relationships in Malawi, we first turn to our qualitative interviews to describe the typical process through which new partnerships are formed. In rural Malawi, men “propose” to women. Their proposal typically entails an invitation to a woman to be his girlfriend, and not a proposal for marriage, with both men and women considering it unseemly for women to initiate contact (Poulin, 2007). At the time of the proposal, many aspects of the relationship are left undefined, with the exception of sexual activity. Nearly all young men and women agreed that accepting a proposal was tantamount to agreeing to have sex. In the South, the relationship was usually consummated within 2 weeks of the proposal, whereas in the North initiation of sexual activity was sometimes delayed for up to a month.

Although men will often not specify the exact type of partnership they seek, they may allude to their degree of sincerity and to the strength of their emotional feelings. The type and amount of gifts given and accepted may also signal both parties' level of commitment. Proposals from men often include flattering comments about the woman's beauty and descriptions of the intensity of his feelings for her. Women too may signal their expectations and feelings in their response. For example, in the following brief excerpt, an interviewer asks about the woman's response to a young man's recent proposal. The woman responding to her suitor seems to have aspirations for developing a long-term, serious relationship right at its outset.

> I: What did she write [back]? R: The letter was full of love flowers and words like kiss to kiss, our love will not end until Jesus come and take one of us. (Man, age 20)

Both men and women identify this courtship period as a time to gather critical information about a prospective spouse. Some men explicitly state that they currently have two or more girlfriends because they are trying to decide which one will make the better wife. One formerly married female respondent stated that before taking another husband she would first accept him as a *chibwenzi* (boyfriend). Only after learning about his behavior and character would she agree to marry him, as the following conversation between an interviewer and a respondent demonstrates:

> I: Do some people first have *chibwenzi* [boyfriend] or *chitomelo* [fiancé] and then marry that person? R: Yes. I: Why? R: Because they know each other well and love each other. (Woman, age 21)

In several interviews, boyfriends report their girlfriends as having nudged them toward marriage:

> I: How do you know that she is a right girl for marriage? R: She keeps on talking of marriage each time we are together. She says *chibwenzi* is the beginning of marriage. (Man, age 24)

If, as these interviews imply, the desire to find a suitable marriage partner is an important reason for establishing sexual partnerships, then we would expect to find that, as individuals draw closer to their desired age of marriage, they would be more likely to become sexually active, be currently sexually active, and—on average—increase their total number of partners as they seek their future spouse. In our first set of analyses, we examine whether desired age of marriage for women has an effect on the likelihood of forming sexual partnerships, independent of age and important sociodemographic controls.

We find that as women approach their ideal age of marriage, the probability of initiating sexual activity increases significantly, although the magnitude of this relationship diminishes after adding controls for age and socioeconomic factors (Table 2). In Model 3 of Ever Had Sex, for example, the odds of having ever had sex are 4.2 times higher for women who are within 1 year of their ideal age of marriage than they are for women who are more than 5 years away from the time they wish to marry. There is no difference in the odds of ever having had sex between women who say they never want to marry and those who want to marry in more than 5 years. Age initially has a significant effect, but this relationship becomes insignificant once we account for whether the woman is currently in school. Being enrolled in school is strongly negatively associated with having had sex for young women.

Marital aspirations are most strongly tied to whether women are recently sexually active. Compared to women who want to marry in more than 5 years, the odds that a woman reports being sexually active are 7.7 times higher for those who desire marriage in the next year (Model 3). Unlike in the models for Ever Had Sex, neither age nor the socioeconomic variables appear to have any significant bearing on sexual partners in the last year, although their inclusion reduces the magnitude of the association with marital aspirations. Finally, Table 2 examines women's total number of sexual partnerships. Again, marital aspirations appear to play an important role. Even after controlling for age, schooling, economic status, and region, we find that, as women approach their desired age of marriage, their number of sexual partnerships increases significantly. Consistent with the literature, both being currently in school and living in the more conservative northern region of Malawi reduce women's total number of sexual partners.

Table 3 displays similar models for men. Unlike for women, men's age and their regional location, rather than desired time until marriage, are significantly related to entry into sexual activity. After controlling for other variables influencing sexual behaviors, there is little evidence that when men first have sex is tied to when they wish to marry. Whether men are

currently in a sexual relationship, however, is strongly related to their preferences about marriage. The odds of having a recent sexual partner increase monotonically as men get closer to their ideal age at marriage. Men who aspire to marry within the next year have 3.5 times higher odds of being sexually active in the last year than men who do not wish to marry within the next 5 years. In these models, the effects of marital aspirations appear to trump those of biological age and other measures of socioeconomic status, although we continue to find lower overall levels of sexual activity in the northern region. Finally, in the absence of any other control variables, we find that men's reported total number of lifetime sexual partners increases steadily as they approach their ideal age of marriage. Once controls for age, schooling, wealth, and region are included, however, this relationship disappears. Like our findings on sexual debut, age and region are the strongest predictors of total number of lifetime partners for young men.

Do Adolescents Engage in Different Sexual Behaviors With Their Fiancé(e)s Than With Other Sexual Partners?

Tables 4 and 5 examine whether young men and women engage in different sexual behaviors with their fiancé(e)s than with their spouses, steady boyfriends and girlfriends, or casual partners. Unlike in our models of sexual partnership formation, the inclusion of controls for age and socioeconomic characteristics has a much weaker effect on the coefficients of types of partnership. We therefore focus our discussion on the full models (Models 3). Both men and women report being most likely to always use condoms with their fiancé(e)s, although this difference is only statistically significant with respect to spouses with whom condoms are rarely used. For women, having at least some secondary schooling increases condom use, but this relationship is not significant for men. Relative to their fiancé(e)s, both men and women report a much higher frequency of sex with their spouses (odds ratio of 7.2 for women and 7.3 for men). Interestingly, men report having sex more often with their steady and casual partners and women report having sex less often with these partners, although these differences rarely reach significance.

Several men in our qualitative study also report having low frequency of sexual contact with their fiancées. This excerpt from an in-depth interview offers one possible explanation:

> R: I have a girlfriend whom I will marry and the other is for pleasure. I: So why have the other partner while you are engaged? R: She [the fiancée] most of the time refuses to sleep together. She says we will do more when we get married, so I cannot be just staying without sex until the marriage. (Man, age 22)

This comment raises another important issue: sexual exclusivity. Are concurrent partners more common among engaged couples than married couples? Do men and women believe that their fiancé(e)s are more faithful than their other nonmarital partners? The general pattern that emerges is that both men and women report and suspect lower levels of sexual exclusivity from their fiancé(e)s than from their spouses. Relative to their other nonmarital partners (particularly casual partners), however, fiancé(e)s generally report and suspect greater fidelity. A notable exception is that engaged men report being slightly more likely to have other partners than do men with steady or casual partners. One possible explanation for this anomalous finding is that men in this age group tend to have long engagements, and we lack adequate controls for relationship duration. Reports of concurrent partnerships and suspicions about such partnerships do not vary by age or socioeconomic status. Even region appears to be unrelated to partnership concurrency, although it is strongly related to total number of partners.

Differences in expectations of fidelity by partnership type were regularly mentioned in the in-depth interviews. For both men and women, suspicion of infidelity was often grounds to end a relationship, particularly among engaged couples:

> I: What made you not marry her? R: I found her with another boy under a certain tree that is on the way here. I: What were they doing? R: I don't know, but I saw them very near to each other but she couldn't recognize me. I had put on a hat and the next day I wrote her a letter ending the relationship and to my surprise, she didn't reply and I did believe that [he] was her boyfriend as well. (Man, age 22)

Are Concerns About AIDS Shaping Marital Aspirations?

In Table 6, we examine whether concerns about HIV are reflected in youths' marital aspirations. We find that over 80% of unmarried men and women in our sample said they plan to get tested for HIV prior to getting married. This high proportion is rather surprising given the fact that voluntary counseling and testing (VCT) services were not yet readily available in the survey areas in 2004. Interestingly, roughly half of the women and men also reported that they would remain with their fiancé(e) even if their partner was found to be HIV-positive.

We find that both unmarried men and women are deeply divided about whether they thought marriage offered protection from infection. Men are slightly more likely than women to view marriage as protective. There is no strong evidence that respondents felt marriage would be more protective for men than for women or vice versa. This ambiguity is reflected in our qualitative data. Interviews revealed that participants' perceptions depended on assumptions of faithfulness within marriages, as demonstrated by the following excerpt:

> I: Do you then think marriage can prevent a man or woman from getting AIDS? R: Yes I believe so as when someone is married there is no way you can propose love or have another sexual partner as you always have everything you want from your wife like sex. (Man, age 24)

Yet others did not think marriage could offer protection, because they believed that no one can completely avoid infection:

> I: Do you think a woman or man can avoid AIDS by getting married? R: No! Not at all! Prevention of AIDS doesn't [have anything to] do with marriage. It's a person's heart that makes a decision and not marriage. One can be married but not honest to his or her partner. (Man, age 23)

The in-depth interviews also show that married women perceived themselves to be particularly vulnerable to infection in cases where husbands have other sexual partners, as this young woman explains:

> I: Do you think a woman can avoid AIDS by getting married? R: A woman cannot avoid AIDS by getting married because she cannot be sure, maybe [her] husband will have other partners so she can get AIDS while she is married. (Woman, age 17)

In addition, respondents were asked whether they thought getting married at older or younger ages would be more protective. Again, we find that both men and women are divided about this question, with slightly more respondents reporting that the risks associated with early marriage were greater. During the survey interview, unmarried respondents (after affirming that they wished to marry in the future) were asked to name the three most desirable characteristics they sought in a prospective spouse. These results, presented in Table 6, indicate that for both men and women finding an HIV-negative spouse is the single most desirable characteristic and was mentioned by more than half of all respondents. Over 30% of respondents also mention fidelity as a highly desirable trait. These same ideal spousal characteristics are echoed by respondents in the in-depth interviews. As described by a 17-year-old, school-going respondent:

> R: I hope to get married after I finish school, and I should be almost twenty-five years when I get married. I hope to get married with a man who will respect my parents,

> not be movious [i.e., promiscuous], and a man who will not have another partner [and] who will be cool. In addition, he should be educated. (Woman, age 17)

Finding an uninfected partner, however, may be a challenge, as this young man suggests:

> I: So who will you marry? R: Someone with good behavior in the sense that she should be respectful to elders, and even myself, and should be a hardworking wife both in the field and at home. I: Do you foresee any obstacle? R: Yes, there is AIDS that I fear the most, as nowadays many are with AIDS. (Man, age 23)

When given a choice between two hypothetical, contrasting spousal characteristics, both men and women expressed clear views about perceived HIV risk associated with each. A series of questions with dichotomous responses was asked of all survey respondents, designed to ascertain the perceived relative risks of contrasting spousal types. For instance, when asked whether younger or older spouses posed the greater HIV risk, more than two thirds of respondents believed older spouses carried a greater risk. Clear majorities of men and women also agreed that a monogamous marriage with a spouse who was relatively poor, more religious, and came from their own village would lower the risk of HIV/AIDS. The extent to which they act on these beliefs or to which these perceptions correspond to actual risk is unknown.

Discussion

Using a developmental life course perspective to investigate the relationship between first marriage and HIV risk in Malawi brings into sharp focus the importance of marital aspirations —including preferences about when to marry and whom to marry—with respect to premarital sexual behavior, particularly for women. In the in-depth interviews, many unmarried women explicitly express their desire that their current partnerships will evolve into marriage. Hoping to marry sooner (rather than later) is strongly correlated with their initiation of sexual activity, their recent level of sexual activity, and their total number of lifetime sexual partners. The fact that these associations remain significant even after controlling for their biological age and other sociodemographic characteristics suggests that adolescent women are behaving in accordance with their future life course aspirations with respect to marriage. Our findings, therefore, stand in contrast to usual portrayals of adolescent women in sub-Saharan Africa, in which their sexual behaviors are viewed either as beyond their control (because of high levels of poverty or pervasive gender inequality) or as a function of immediate short-term gains (such as exchanging sex for money or gifts). Although young women's social and cultural environments shape their sexual behaviors (as we can see from the strong effect of region), we find evidence that young women may also exert agency in an effort to shape their life trajectories. Moreover, as young women become increasingly responsible for arranging their own marriages, some will choose sexual abstinence before marriage, but for others the desire to find a suitable husband will be an important motivation for establishing sexual partnerships.

For adolescent men in our sample, the link between preferences about when to marry and the establishment of partnerships is much weaker. The absence of a strong link may partially reflect the young age of our sample—over half of the men reported being more than 5 years away from their ideal age of marriage. The lack of association, however, may also indicate that marital aspirations play a larger role in the formation of women's premarital sexual partnerships than in men's. Men's biological age and the region in which they reside, rather than their anticipated date of marriage, are strongly related to their sexual debut as well as to their total number of sexual partners. By contrast, whether an unmarried Malawian man was sexually active the year before the survey is highly correlated with a desire to marry in the near future. This suggests that being in a sexual relationship may turn some men's thoughts toward marriage.

We also find that both men and women report engaging in different sexual behaviors with their fiancé(e)s than with their other sexual partners. The most striking differences are between spouses and fiancé(e)s. Both men and women report not only greater sexual contact with their spouses but also a much lower propensity to use condoms with them. Among nonmarried couples (i.e., excluding spouses), there are few significant differences with respect to either condom use or sexual frequency. Both men and women *expect* higher levels of sexual fidelity from their betrothed than from casual partners. Men, however, *report* being least faithful to their fiancées. Thus, intending to marry someone is weakly associated with greater expectations of sexual exclusivity, but it is actual marriage that marks the most pronounced change in sexual frequency and condom use.

Finally, we find considerable evidence that the AIDS epidemic is strongly shaping young men's and women's aspirations regarding both the timing of marriage and the type of partner they find desirable. Whether the epidemic will shape their actual age of marriage or selection of spouses is not known, but it seems likely. Finding an HIV-negative spouse is of paramount importance to young men and women, although nearly half would still be willing to get married to an infected fiancé(e). In the absence of certainty about the HIV status of their possible spouses, unmarried men and women hold a surprisingly consistent set of assumptions about who is most likely to be infected. Yet they do not seem to agree about whether marriage itself is protective or when one should get married to minimize risks. It is clear that both men and women are quite worried about finding a safe pathway into marriage and an HIV-negative spouse—but they are rather unsure how to do so.

Can taking a life course perspective aid adolescents and policymakers in finding an HIV-free path to adulthood, particularly marriage? We believe so. Linking young Malawians' current sexual behaviors to their future aspirations places these behaviors in the broader context of their lives and allows for the recognition of their multiple, and sometimes competing, goals. Although for some the preferred path to marriage is abstinence, for others establishing premarital sexual partnerships and gaining sexual experience is an important step toward marriage. The challenge for the latter group is to minimize the risk of HIV during this process.

Does searching for a marital partner greatly increase the risk of contracting HIV? If so, then does the fact that women undergo their marital search process at younger ages partially account for young women's higher rates of HIV infection? In the absence of longitudinal data with regular HIV testing that follow young men and women as they cross the marriage threshold, it is not possible to answer this question with certainty. Yet our results suggest that wanting to get married prompts young women to establish sexual partnerships. These findings support Magruder's (2007) argument that the search for a marital partner is an important motivation for establishing new partnerships and, therefore, helps sustain the epidemic. Once a suitable spousal partner is found, however, sexual behaviors among engaged couples are relatively safe. Compared to other nonmarital sexual partners, men and women expect somewhat higher levels of sexual exclusivity from their fiancé(e)s. Engaged couples have sex far less often than married couples and are much more likely to use condoms when they have sex. Thus the most abrupt transition in potential HIV exposure via frequent and unprotected sex happens after marriage.

Nonetheless because marriage is typically a process rather than a discrete event in many African societies (Bledsoe, 1990; Bledsoe & Pison, 1997; Meekers, 1992), couples often remain engaged for long periods of time, allowing for ample opportunities to work with engaged couples to strengthen their protective behaviors, such as high levels of condom use, limited sexual contact, and greater expectations of mutual sexual monogamy, and to discourage their risky behaviors. Engaged men, in particular, may benefit from messages about greater fidelity. The extended process of marriage also affords time to get tested for HIV. Expanding VCT services to engaged couples, or even requiring testing before marriage, could both help prevent

bringing HIV into marriage and foster more responsible premarital sexual behavior. We find that a full 80% of unmarried youths report that they want to be tested for HIV along with their partners at the time of marriage. Encouraging engaged couples to take one or more HIV tests during the marriage process would greatly reduce the odds of either partner bringing HIV into the union unwittingly. Thus, our findings suggest that by viewing adolescent behaviors as part of a life course continuum and by taking advantage of the extended process of marriage, adolescents and policymakers alike may be able to find much safer and healthier pathways into marriage.

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Table 1

Sexual Behaviors, Marital Aspirations, and Sociodemographic Characteristics of Men and Women Aged 15 – 24

	Unmarried Respondents		Last Two Partners of All Respondents	
	Women (*n* = 252)	Men (*n* = 393)	Women (*n* = 470)	Men (*n* = 550)
Formation of sexual partnerships				
Ever sexually active (%)	44.7	70.2		
Sex in the last year (%)	25.0	40.0		
Number of lifetime partners (mean)	0.8	2.5		
Number of lifetime partners among sexually active (mean)	1.5	3.4		
Sexual behaviors within partnerships				
Usually used condom			9.5	19.3
Had sex at least a couple times per week			63.7	55.9
Had other sexual partners during relationship			11.4	25.0
Suspected partner of having other sexual partners			25.8	26.2
Marital aspirations				
Timing of marriage				
Does not want to get married (%)	16.6	7.6		
Age at which he/she wants to marry (mean years)[a]	22.4	25.0		
Desired time untill marriage (mean years)[a]	4.5	6.7		
Desired time until marriage (%)[a]				
Marry in >5 years	31.1	55.9		
Marry in 4 – 5 years	21.8	15.5		
Marry in 2 – 3 years	23.4	23.0		
Marry in 0 – 1 years	23.8	5.7		
Type of sexual partnership				
Spouse			66.4	18.8
Fiancé(e)			5.8	9.3
Steady			13.7	25.4
Casual			14.1	46.5
Demographic and economic characteristics				
Age (mean years)	17.7	18.4	20.1	19.5
Level of education (%)				
Primary school or less	76.6	74.4	84.1	72.3
Secondary or higher	23.5	25.6	15.9	27.7
Currently in school (%)	56.2	60.5	10.3	41.9
Wealth index (%)				
Poorest (lowest third)	24.8	38.9	38.0	31.6

	Unmarried Respondents		Last Two Partners of All Respondents	
	Women (*n* = 252)	**Men (*n* = 393)**	**Women (*n* = 470)**	**Men (*n* = 550)**
Middle (middle third)	30.5	28.2	27.3	37.2
Richest (highest third)	44.7	32.9	34.7	31.2
Region (%)				
South	22.5	32.4	40.0	44.7
Central	48.0	33.0	34.3	30.3
North	29.5	34.6	25.8	25.0

Note: Estimates are weighted by the inverse probability of being in the sample by age, marital status, and region.

[a] Among those who want to marry.

Table 2

Effects of Marital Aspirations on Sexual Debut, Sex Last Year, and Total Number of Partners Among Never-Married Women

	Ever Had Sex (Logistic Regression)						Sex Last Year (Logistic Regression)						No. of Partners (Negative Binomial Model)					
	Model 1 (*n* = 238)		Model 2 (*n* = 238)		Model 3 (*n* = 233)		Model 1 (*n* = 236)		Model 2 (*n* = 236)		Model 3 (*n* = 231)		Model 1 (*n* = 239)		Model 2 (*n* = 239)		Model 3 (*n* = 234)	
Dependent variable	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	IRR	Sig.	IRR	Sig.	IRR	Sig.
Desired time until marriage																		
Never want to marry	1.40		1.37		1.01		3.45		3.43		2.47		1.79		1.77		1.33	
Marry in >5 years (ref)	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Marry in 4 – 5 years	3.02	**	2.65	*	2.43	*	5.39	**	5.10	*	4.69	*	2.01	*	1.83		1.71	
Marry in 2 – 3 years	3.36	**	2.83	*	1.85		5.61	**	5.20	**	3.69	*	3.04	***	2.70	**	1.89	*
Marry in 0 – 1 year	11.48	***	8.42	***	4.23	*	14.79	***	12.91	***	7.74	**	5.62	***	4.64	***	2.57	**
Age (years)			1.19	*	1.13				1.07		1.02				1.10		1.10	
Educational attainment																		
Primary school or less (ref)					1.00						1.00						1.00	
Some secondary					1.93						1.04						1.21	
Currently in school					0.39	**					0.51						0.59	*
Wealth index																		
Poor (ref)					1.00						1.00						1.00	
Middle					0.70						1.00						0.80	
Rich					0.57						0.94						0.87	
Region																		
South (ref)					1.00						1.00						1.00	
Central					1.38						1.35						0.89	
North					0.64						0.92						0.38	***
Alpha[a]													0.36	*	0.34	*	0.12	

OR: odds ratio; IRR: incidence rate ratio.

[a] Likelihood ratio test of alpha = 0.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 3

Effects of Marital Aspirations on Sexual Debut, Sex Last Year, and Total Number of Partners Among Never-Married Men

	Ever Had Sex (Logistic Regression)						Sex Last Year (Logistic Regression)						No. of Partners (Negative Binomial Model)					
	Model 1 (*n* = 353)		Model 2 (*n* = 353)		Model 3 (*n* = 345)		Model 1 (*n* = 356)		Model 2 (*n* = 356)		Model 3 (*n* = 348)		Model 1 (*n* = 355)		Model 2 (*n* = 355)		Model 3 (*n* = 347)	
Dependent variable	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	IRR	Sig.	IRR	Sig.	IRR	Sig.
Desired time until marriage																		
Never want to marry	0.83		0.80		0.46		1.63		1.58		1.56		1.32		1.32		1.09	
Marry in >5 years (ref)	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Marry in 4 – 5 years	1.76		1.44		1.53		1.26		1.11		1.12		1.30		1.21		1.05	
Marry in 2 – 3 years	3.72	***	2.49	*	1.93		3.37	***	2.80	**	3.25	**	1.65	**	1.45	*	1.29	
Marry in 0 – 1 year	4.65	**	1.95		1.78		3.89	**	2.64	*	3.45	*	1.80	**	1.32		1.06	
Age (years)			1.25	***	1.20	*			1.10		1.10				1.08	**	1.08	*
Educational attainment																		
Primary school or less (ref)					1.00						1.00						1.00	
Some secondary					2.03						1.33						1.23	
Currently in school					0.62						1.20						0.83	
Wealth index																		
Poor (ref)					1.00						1.00						1.00	
Middle					1.38						0.97						0.95	
Rich					1.21						1.01						0.97	
Region																		
South (ref)					1.00						1.00						1.00	
Central					0.23	***					0.88						0.93	
North					0.09	***					0.51	*					0.38	***
Alpha[a]													0.83	***	0.79	***	0.61	***

OR: odds ratio; IRR: incidence rate ratio.

[a] Likelihood ratio test of alpha = 0.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 4

Effects of Type of Partnership on Sexual Behaviors Within Last Two Partnerships (Women)

	Usually Use Condom (Logistic Regression)						Frequent Sex (Logistic Regression)						Had Other Partners (Logistic Regression)						Suspected Partner (Logistic Regression)					
	Model 1 (*n* = 454)		Model 2 (*n* = 454)		Model 3 (*n* = 447)		Model 1 (*n* = 441)		Model 2 (*n* = 441)		Model 3 (*n* = 434)		Model 1 (*n* = 453)		Model 2 (*n* = 453)		Model 3 (*n* = 447)		Model 1 (*n* = 360)		Model 2 (*n* = 360)		Model 3 (*n* = 358)	
Dependent variable	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.
Type of partnership																								
Fiance(e) (ref)	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Spouse	0.09	***	0.05	***	0.07	***	8.71	***	8.22	***	7.18	***	0.77		0.75		0.61		1.49		1.19		0.97	
Steady	0.59		0.50		0.81		0.86		0.85		0.92		3.49		3.47		2.91		1.46		1.41		1.54	
Casual	0.64		0.56		0.78		0.46		0.45		0.46		3.11		3.10		2.86		3.68	*	3.52	*	4.12	*
Age			1.19	*	1.16				1.02		1.01				1.01		0.99				1.06		1.07	
Educational attainment																								
Primary school or less (ref)					1.00						1.00						1.00						1.00	
Some secondary					3.00	*					1.00						0.99						1.42	
Currently in school					1.47						0.58						0.51						0.51	
Wealth index																								
Poor (ref)					1.00						1.00						1.00						1.00	
Middle					2.24						1.35						0.73						0.97	
Rich					1.58						0.75						0.91						0.68	
Region																								
South (ref)					1.00						1.00						1.00						1.00	
Central					0.94						1.07						0.74						0.61	
North					3.70	*					0.92						0.48						1.17	

Note: All regressions are limited to female respondents who report having ever had sex. Because each respondent was permitted to report up to two sexual partners, we control for clustering by respondent.

* $p < .05$.

*** $p < .001$.

Table 5

Effects of Type of Partnership on Sexual Behaviors Within Last Two Partnerships (Men)

	Usually Use Condom (Logistic Regression)						Frequent Sex (Logistic regression)						Had Other Partners (Logistic Regression)						Suspected Partner (Logistic Regression)					
	Model 1 (*n* = 525)		Model 2 (*n* = 525)		Model 3 (*n* = 497)		Model 1 (*n* = 511)		Model 2 (*n* = 511)		Model 3 (*n* = 483)		Model 1 (*n* = 531)		Model 2 (*n* = 531)		Model 3 (*n* = 503)		Model 1 (*n* = 416)		Model 2 (*n* = 416)		Model 3 (*n* = 399)	
Dependent Variable	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.	OR	Sig.
Type of partnership																								
Fiancé(e) (ref)	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Spouse	0.08	***	0.05	***	0.08	***	9.41	***	10.97	***	7.25	***	0.44	*	0.39	*	0.33	*	0.93		0.80		0.68	
Steady	0.68		0.79		0.88		2.19	*	2.08		1.75		0.70		0.73		0.68		2.93	*	3.11	*	3.30	*
Casual	0.57		0.66		0.71		1.98		1.87		1.98		0.58		0.61		0.56		4.46	**	4.81	**	5.55	**
Age			1.24	***	1.20	**			0.93		0.93				1.05		1.06				1.07		1.08	
Educational attainment																								
Primary school or less (ref)					1.00						1.00						1.00						1.00	
Some secondary					1.64						0.88						0.92						0.72	
Currently in school					0.87						0.68						1.01						0.81	
Wealth index																								
Poor (ref)					1.00						1.00						1.00						1.00	
Middle					1.57						0.89						0.86						1.08	
Rich					1.22						1.05						0.69						0.90	
Region																								
South (ref)					1.00						1.00						1.00						1.00	
Central					0.83						0.64						0.90						0.78	
North					1.10						0.32	***					1.13						1.54	

Note: All regressions are limited to male respondents who report having ever had sex. Because each respondent was permitted to report up to two sexual partners, we control for clustering by respondent.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 6

HIV/AIDS Concerns, Timing of Marriage, and Ideal Spousal Characteristics

	Unmarried Women (%) (*n* = 252)	Unmarried Men (%) (*n* = 393)
A. Marital aspirations and the timing of marriage		
Plan to get tested for HIV before marriage[a]	80.9	88.1
If spouse HIV-positive would refuse to marry him/her[a]	52.0	56.7
Men can avoid HIV through marriage	43.2	58.3
Women can avoid HIV through marriage	49.7	60.2
HIV risks are higher if you marry later in life	46.3	42.6
HIV risks are higher if you marry earlier in life	53.7	57.4
B. Important characteristics of future spouse (up to 3)[a]		
Attractive	16.4	42.0
Educated	49.4	40.1
Employed	34.2	7.3
Wealthy	13.1	8.1
Live in same district	17.4	24.4
Skilled at cleaning and cooking	33.6	38.4
HIV-negative	56.7	50.1
Faithful	30.0	36.2
Good personality	19.8	21.0
Older	4.4	2.7
Younger	4.4	10.5
Same age	3.0	8.8
C. HIV risks are higher if you marry someone who is:		
Young	28.4	32.2
Old or older	71.6	67.8
From the nearest city	92.3	85.5
From your village	7.8	14.5
Poor	8.7	23.3
Wealthy	91.3	76.7
Not religious	70.4	73.0
Religious	29.6	27.0
Polygamous	86.7	83.2
Monogamous	13.3	16.8

Note: Estimates are weighted by the inverse probability of being in the sample by age, marital status, and region.

[a]Among those who want to marry.