Employment, Transactional Sex, and Bargaining within Premarital Relationships in Urban Kenya

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ABSTRACT

This study applies the household bargaining model to sexual decision-making in premarital relationships in a context of high HIV/AIDS prevalence. Using life history calendar data collected from women ages 18-24 in Kisumu, Kenya, the study explores linkages between two important sources of women's economic resources—employment and material transfers from male partners—and sexual behavior within premarital relationships (N=503 relationships). Consistent with a bargaining perspective, results show that employment and income increase the likelihood of safe sexual behavior, including delaying sex and using condoms consistently. Material transfers display the opposite effect, supporting the view the resources obtained from within the relationship decrease women's negotiating power. Finally, bargaining dynamics appear to be similar at the beginning and later stages of relationships.

The household bargaining model is often used as a framework to examine decision-making power and the allocation of resources between spouses, including investments in child education and negotiations surrounding housework. The model is less often applied to relationships outside of marriage and important decision-making realms within these partnerships. In sub-Saharan Africa as across the globe, sexual initiation increasingly occurs before marriage, which means that greater proportions of young women are involved in premarital relationships (Mensch, Grant, & Blanc, 2006). In these partnerships, a pivotal point of negotiation is sexual activity, including whether to have sex and whether to use condoms. These decisions are of particular importance to the health and wellbeing of young African women, who face some of the highest rates of HIV/AIDS infection and mortality worldwide (Patton et al., 2009).

The bargaining literature focuses on economic participation and earnings as key resources that enhance women's decision-making power. Feminist scholars argue, however, that the effects of these resources are conditioned by their nature and source. In the context of limited labor force opportunities, many African women work in informal occupations whose low level of pay might not readily translate into decision-making power. In addition, as an alternative strategy to gain economic benefits, many women engage in "transactional sex," whereby they receive money and gifts (what we refer to as material transfers) from their male nonmarital partners. The receipt of such transfers from *within* the relationship is hypothesized to decrease women's ability to negotiate sexual activities with these partnerships. The first goal of our study is to examine the effects of these two different sources of economic resources on the likelihood of sexual intercourse and condom use within young women's premarital relationships. It could be the case that economic resources from some sources and of some types are, in fact, disempowering.

Previous work tends to view household bargaining as static, with processes working similarly regardless of the stage of the relationship. This is due at least in part to data limitations, as most studies fail to follow and collect information on the same partnerships over time. Bargaining power may, however, change over time, and this is likely to also be true for premarital relationships. For example, at the time of relationship formation, partners are new to each other and individual bargaining power may be crucial to determining important outcomes, such as whether to delay sexual intercourse or use condoms. As relationships evolve, partners may develop similar preferences for sexual activities, and economic resources and bargaining may play less of a role in sexual negotiations. The second goal of our study is to examine the association between various forms of economic resources and sexual behavior outcomes at the beginning and later stages of young women's premarital relationships.

To accomplish these dual aims, we use unique life history survey data collected from young women in urban Kenya. A major virtue of this data set is that it contains detailed information on young women's employment and income as well as the amount of material transfers received from male partners. These data are particularly suited to test our predictions that these two sources of economic resource have opposing effects on sexual behavior outcomes. Furthermore, the data trace young women's relationship histories, providing us the opportunity to examine how these associations change over the course of premarital relationships.

Theoretical Perspectives

Economic and sociological theories of intra-household relations seek to explain how access to resources determines decision-making power and welfare outcomes within households. An initial assumption is that men and women differ in their preferences for the allocation of household expenditures, and therefore a process of bargaining takes place between them. Bargaining power is not equally distributed across household members but reflects the relative strength of one's "fallback position" or how well off he or she would be in the event that household cooperation failed. Access to resources outside the household strengthens an individual's fallback position relative to other members and affords him or her more power to make important decisions (Agarwal, 1997; Bittman, England, Folbre, Sayer, & Mathaeson, 2003; Kabeer, 1997; Kantor, 2003; McElroy, 1990). Independent employment and earnings are key resources theorized to increase one's bargaining position, although education, access to family support, and other cultural resources can empower women as well (Malhotra & Mather, 1997; McElroy, 1990; Niraula & Morgan, 1996).

A large body of research has tested this bargaining framework in developing countries. This work assumes that women have stronger preferences than men for investing in the health and welfare of themselves and their children, while men generally place greater emphasis on personal consumption (Anderson & Baland, 2002; Luke & Munshi, 2004). Supporting the bargaining framework, many studies find a *positive effect* of women's income and other resources on outcomes such as child education and the use of maternal health services and contraception (e.g., Beegle, Frankenberg, & Thomas, 2001; Dharmalingham & Morgan, 1996; Luke & Munshi, 2004).

However, multiple studies, particularly from South Asia, find little evidence of an association between various forms of women's economic resources, bargaining power, and expected welfare outcomes (e.g., Kantor, 2003; Malhotra & Mather, 1997). This has led feminist and other scholars to theorize as to why women's economic power is constrained in some contexts. They argue that labor force participation itself does not necessarily lead to increased bargaining power, and the effects of economic resources are conditioned by their nature and source. For example, earnings from insecure, informal sector work or low-paying occupations make relatively small contributions to household budgets and therefore do little to bolster women's negotiating power (Kabeer, 1997; Kantor, 2003). Social norms can also limit the household domains in which bargaining can occur; this is particularly true in areas in which men's domination is considered inherent, such as husbands' personal consumption, or in which women's responsibilities are seen as natural, such as housework and child care (Agarwal 1997; Bittman et al., 2003). Such circumstances may be prevalent in sub-Saharan Africa as well, where women's labor force opportunities are often severely limited (UNIFEM, 2005) and where male authority continues in many household arenas.

The bargaining literature to date has focused on decision-making over household expenditures between husbands and wives. Few researchers have used a bargaining framework to examine whether economic resources enable women to negotiate over sexual activities (Conrad & Doss, 2008; for exceptions, see Parrado and Flippen, 2005; Wolff, Blanc, and Gage, 2000), and, in particular, in relationships outside marriage. We expect young women in premarital

relationships in sub-Saharan Africa to be more inclined to refuse sexual intercourse and use condoms relative to their male partners, given the social and financial repercussions for them resulting from pregnancy outside marriage (Luke, 2006). We hypothesize that employment and income can increase young African women's power to negotiate these sexual behavior outcomes despite traditional norms of male decision-making in this realm (Wolff et al., 2000).

An alternative source of economic resources for many women in sub-Saharan Africa is transactional sex. Most of the research on transactional sex assumes that the receipt of material transfers disempowers women within their nonmarital relationships (e.g., Dunkle, Jewkes, Brown, Gray, McIntryre & Harlow, 2004; Kuate-Defo, 2004; Luke, 2006; Maganja, Maman, Groues, & Mbwambo, 2007). Situating these circumstances within the bargaining framework helps to more fully theorize why the receipt of such resources can be disempowering for women. Because material transfers stem from inside the relationship rather than from outside sources, these transfers render women dependent on their partners, which reduces their bargaining position. In a context with poor options for stable, independent income, fear of losing economic benefits if the relationship dissolves further weakens women's fallback position. Thus, we expect that receipt of maternal transfers from male partners *decreases* women's negotiating power and has a *negative* effect on sexual behaviors that women prefer. Evidence from qualitative studies in sub-Saharan Africa supports this hypothesis. Many young women realize receipt of transfers means they must reciprocate by agreeing to unsafe sexual practices demanded by their partners (Kaufman & Stavrou 2004; Maganja, Maman, Groues, & Mbwambo, 2007; Moore, Biddlecom, & Zulu, 2007). Quantitative investigations are less common (for exceptions, see Dunkle et al., 2004; Luke, 2006; Moore et al., 2007), and none has considered the effects of material transfers as well as women's own income on sexual behavior outcomes simultaneously.

Another important issue relates to the dynamics of bargaining power. Although scholars have recognized that women's power can change dramatically over the life course (Das Gupta, 1995), there has been little research on changes in bargaining power over the course of *relationships*. In sub-Saharan Africa, it is generally believed that in nonmarital partnerships, as partners become more familiar and love and trust develop over time, they agree to discontinue condom use. This is partly because condoms are associated with lack of commitment and fidelity. Thus, bargaining over condom use is assumed to take place at the beginning of relationships but not at later stages. Again, most of the evidence stems from qualitative research (e.g., Tavory and Swidler, 2009; Harrison, Nonhlanhla, & Kunene, 2002). An alternative possibility is that partners disagree about sexual activities at all stages of relationships, with young women continuing to prefer refraining from sexual intercourse and using condoms as relationships progress. Such a scenario could be increasingly true in contexts with generalized HIV/AIDS epidemics where the risks to young women are particularly high.

The current analysis investigates the effects of economic resources from two different sources—employment and male partners—on sexual behavior, and how these associations vary in earlier and later stages of young women's premarital relationships. Our data include information on male partner and relationship characteristics that allow us to control for important factors that are likely to be correlated with economic resources and sexual behavior. Individual female and male partner characteristics include age, educational attainment, current schooling status, and economic status. These generally show positive associations with abstinence and condom use

(Lloyd 2007; Hargreaves et al., 2007), and they are also likely to be related to transfers; males with these characteristics can afford to give larger transfers and females with these characteristics may need transfers less (Luke, 2008). Relationship characteristics include the age difference between partners, which is often viewed as a measure of bargaining power (Luke, 2003), and the type and duration of the relationship (Hargreaves et al., 2007).

METHOD

Setting and Data

Kisumu, the third largest city in Kenya and headquarters of Nyanza Province, provides an important context in which to explore young women's economic resources and sexual negotiation. An economic hub and destination for many internal migrants as well as the site of multiple schools and colleges, it attracts a range of young people seeking employment and educational opportunities. Kisumu is also the epicenter of a mature HIV/AIDS epidemic in the region. HIV prevalence in the Province was estimated at 15.3% in 2007, more than double the national rate (NASCOP, 2008), and young women are among the most severely affected. The most recent estimates show that 34.8% of never-married females aged 20-24 in Kisumu were infected with HIV compared to 8.3% of their male counterparts (Glynn et al., 2001).

This paper draws on life history data collected using an innovative survey instrument called the "Relationship Histories Calendar" (RHC). The RHC is a modification of life history calendars, which have been successfully used in other studies to gather highly accurate retrospective information on contraception use, births, migration, schooling, and employment (Axinn, Pearce, & Ghimire, 1999; Belli 2009). Similar to many life history calendars, the RHC gathers retrospective information on monthly changes in employment, income, and schooling (Freedman et al. 1988). In addition, the RHC was specifically designed to capture the dynamic processes of youths' sexual and romantic (non-sexual) relationship histories. Respondents provided detailed information about each of their partnerships over the last 10 years, including their partners' demographic characteristics, relationship dimensions (including money and gifts exchanged), and sexual behaviors in each relationship. Ethical approval for the study was granted by all collaborating institutions.

The sample was drawn by contacting every other household in 45 randomly selected urban enumeration areas. Men and women ages 18 to 24 in the selected households were eligible to be interviewed; one eligible respondent was chosen randomly from each household. In order to assess the quality of sexual behavior reporting, selected respondents were randomly assigned to be interviewed with the RHC or a more standard demographic survey. A comparison of reporting by each type of survey instrument found that the RHC decreased social desirability bias and improved reporting on multiple measures of sensitive sexual behaviors in comparison to the standard survey (Luke et al. 2008).

To study the relationship between economic resources and sexual behavior at earlier and later stages of premarital relationships, we construct one data set that includes information on the first month of relationships in the 10 years before the survey, and a separate data set for the last month (or the month of interview if the relationship was still ongoing at the time of survey).

Because we are interested in bargaining within premarital relationships only, for relationships that progress to marriage we designate the last month before marriage as the last month of the premarital relationship. In other words, the beginning and ending months of the *premarital* portion of the relationship are retained in the analysis. We focus on these stages as they represent the extreme points in premarital relationships where changes in bargaining dynamics are likely to be most apparent.

Consistent with the view that many young women initiate sex before marriage, we find that 72.0% of the young women in our sample had at least one premarital sexual relationship in the last 10 years, and, among these, 65.0% had had two or more, for a total of 503 premarital relationships. Approximately 30% of young women had ever married by the time of the survey. Cohabitation was uncommon among the women in our sample, as in sub-Saharan Africa generally, representing less than 1.0% of relationship-months; therefore, any bargaining between partners largely takes place outside a shared household.

Dependent Variables

The dependent variables we examine are sexual activities found to be associated with HIV infection and other poor reproductive health outcomes. The first is a dichotomous indicator for whether sexual activity occurred in the relationship-month. This stems from a question on frequency of intercourse, and is coded 1 if there was any sexual act during the month; 0 for no sexual intercourse. The second dependent variable is a dichotomous indicator for whether there was consistent condom use within the relationship-month. Consistent condom use is coded 1 if the respondent reported that condoms were always used in the month and 0 for most of the time, sometimes, very rarely, or never. We define consistent condom use in this manner because only condom use at each sexual encounter affords the greatest protection from HIV and other sexually transmitted infections (STIs) (Manlove, Ryan, & Franzetta, 2008).

Independent Variables

While the HIV/AIDS literature recognizes that economic resources are important determinants of sexual behavior, most studies use household-level indicators to proxy for individual economic status (Gillespie, Kadiyala, & Greener, 2007). Few studies collect data on individual employment and income, particularly for young women, and fewer still gather details on material transfers from male partners. Our study, in contrast, collected detailed information on both types of resources.

Respondents reported their occupation by type with a corresponding estimate of the amount of income earned per month in the calendar. From this information, we construct two employment variables. First, we create a dummy variable for whether the respondent was employed in the month based on whether or not the respondent earned any income. Second, we include a variable for the amount of income earned in the month.

Respondents were asked to estimate the value of money, gifts, and material assistance received

from each partner in each relationship-month, as well as a separate estimate of the value of transfers they gave to each partner. From this information, we create several material transfers variables. First, we construct dichotomous variables for whether the respondent received any money/gifts/assistance in the relationship-month and whether the respondent gave any money/gifts/assistance. We also include two continuous variables for the estimated value received and given.

In many African settings, women report that money and gifts are the driving force behind their involvement in one or sometimes multiple relationships (Dunkle et al., 2004; Kuate-Defo, 2004). For each relationship-month, we recorded respondents' main and secondary reasons for being in the relationship. "Money/gifts/assistance" was among the multiple response categories, and we construct a dichotomous variable for whether the respondent reported that this was the main or secondary reason for being in the relationship.

We include additional individual-level characteristics as controls. Respondent age is a continuous variable. Educational attainment (none or primary education vs. secondary education or higher) and schooling status (currently attending school or not) are both measured at each month. We also control for household economic status, using an index of household assets and characteristics divided into quintiles that we further dichotomize into higher (fourth and fifth quintiles) and lower/medium (first - third quintiles) economic status. A substantial drawback of this variable is that it was only measured at the time of the survey. Nevertheless, measures of wealth based on accumulated assets and housing characteristics generally change less readily over time than employment and income (Mberu, 2006).

The male partner variables include age (measured continuously), educational attainment (none or primary, secondary, and post-secondary) and schooling status. The partner's economic status is measured as what the respondent *perceived* to be his status (low or medium vs. high) for each relationship-month. Though subjective, we consider this to be an appropriate measure of those aspects of the partner's economic status that might influence the respondent's behavior.

Finally, we include several relationship-specific characteristics. The age difference between partners (male partner's age minus female partner's age) is a time-constant variable. Relationship type is included as a time-varying variable. After extensive pre-testing, we determined the main relationship types in Kisumu to be, in order of seriousness: spouses, fiancés, serious relationships (jadiya), dating relationships, casual relationships, and less common partnership types like commercial sex or one-night stands. Because several categories contained few observations, we created a trichotomous premarital relationship type variable: fiancés or serious, dating, and casual/other. Relationship duration is measured in months and included in the analysis of last relationship-months only.

Last premarital relationship-months represent partnerships at various stages. For many relationships, the last month is the time of dissolution. Other relationships are ongoing at the time of the survey (and are therefore right-censored), and thus the last month represents a continuing, perhaps middle, stage. Finally, for relationships that progress to marriage within the calendar period, the last relationship-month in the sample represents the last month before marriage. We include a trichotomous variable designating the last relationship-month as the end

of the relationship, the current month, or the month before marriage as a control in the last relationship-month analysis. We also tested an alternative specification (not reported) in which the sample of last relationship-months was restricted to relationships that ended, without changing the results.

Analytical Strategy

We begin with descriptive statistics for first and last relationship-months. We then conduct two sets of logistic regressions. The first set uses the sample of first relationship-months to investigate the association between the economic resources variables and the two sexual activity outcomes, controlling for other independent variables. Within this first set, Model 1 includes dichotomous variables for whether any income was earned or any transfers were received, and Model 2 includes the amount of income earned and the amount of transfers received. These amounts are divided by 1000 for ease of exposition. The regressions examining consistency of condom use are limited to first relationship-months in which sexual intercourse occurred.

The second set of regressions uses the sample of last relationship-months. This set includes the same group of independent variables for each sexual activity outcome as the first, with the addition of variables designating the duration of the relationship and the dummy indicator for whether the last relationship-month marked the end of the relationship, the current month, or month before marriage.

Because many young women were involved in more than one relationship in the last 10 years, there are multiple observations for some respondents in the first and last relationship-month data sets. Observations across a respondent's multiple relationships are not independent, and therefore we use the robust cluster command in Stata to compute standard errors that account for heteroscedasticity and correlated residuals across relationships for the same individual.

RESULTS

Descriptive Statistics

Table 1 presents descriptive statistics on employment and material transfers for the first and last months of young women's premarital relationships. In 12.3% of their first relationship-months, young women earned some form of income, and this percentage rose to 19% during the last months. Average earnings increased over time, which is partially a function of the increased labor force participation rate. Across all women (including those with no income), the average earnings were Ksh 467 (US$7) in the first relationship-month and rose to Ksh 700 (US$10) in the last month. The low levels of employment (particularly in last relationship-months when most women are out of school, see Table 2 below), underscore the lack of labor market access many young African women face and the potential importance of transfers from male partners as alternative sources of economic support.

With respect to material transfers, in a large majority (approximately 70%) of relationships, young women received some form of transfer (money, gifts, or other material assistance) during

the first month, and transfers were received in over 60% of relationships in the last month. For all women, the average amount received was Ksh 799 (US$11) in the first month and slightly more on average in the last month (Ksh 849). In contrast, only about one-fifth of young women gave money, gifts, or assistance to their male partners in the first and last months and the amounts were substantially lower. Across all relationships, young women received much more than they gave; if we subtract the amount given from the amount received, we find that women netted Ksh 723 (US$10) in the first month on average, which increased slightly to Ksh 801 by the end of these relationships. In the regression analysis, we include a variable for the amount received as a measure of women's bargaining power rather than the net amount received. If we use the net amount, the results do not change, although in some cases they are slightly less significant (not shown). Regarding young women's reasons for engaging in these relationships, approximately 20% of relationships were reportedly motivated by money, gifts, or assistance in the first and last months.

Table 2 shows characteristics of young women, their partners, and their premarital relationships in the first and last months of these nonmarital partnerships. Young women enter into nonmarital relationships at approximately 17 years old on average. In almost 59% of first relationship-months, young women are currently in school, and this figure drops to 38% by the last month. These figures are 69% and 63%, respectively, for their male partners. Male partners are older than female respondents on average, with an age difference of 4.5 years. Young women reported about 20% of their male partners to be of high economic status. The large majority of young women's premarital relationships were described as "dating" (58%) and about 21% were considered to be very significant (fiancé or serious) in the first month; the remaining 21% were casual or other types of partners. As relationships progressed, they became more serious in nature, with 47% of partners reported to be very significant in the last month. Relationships lasted 18 months on average. Finally, for the majority of relationships (almost 60%), the last relationship month designates the actual end of the relationship, 12% of premarital relationships progressed to marriage, and 27% were ongoing at the time of the survey.

Table 2 also presents descriptive statistics on the sexual behavior outcomes. We find that young women engaged in sexual intercourse during the first month in 34% of their relationships, and in the last month 41% of relationships involved sexual intercourse; thus, in the majority of first and last months, young women did not have sex. It is interesting to note that over one-quarter of young women's premarital relationships (26%) were non-sexual for the duration (not shown). Most surveys neglect to collect information on non-sexual relationships, and ours is among the first to provide evidence of the relatively large proportion of relationships in which young women abstain throughout.

With respect to protection from HIV and other STIs, condoms were used with some frequency in over half (55%) of sexually active relationships during the first month. This figure remained relatively stable, with approximately 50% of relationships including at least some condom use in the last month. We are particularly interested in the findings related to consistent condom use. Consistent condom use occurred in 37% of first months and decreased slightly (33%) in the last month. These findings contradict the view that there are precipitous declines in the level of condom use as young people's relationships progress.

Multivariate Results: First Relationship-month

Results of the logistic regression analysis of the likelihood of having sex and using condoms consistently in the first month of young women's premarital relationships are shown in Table 3. Looking at the regressions predicting sexual intercourse, we see in Model 1 that earning any income and receiving any level of material transfers have opposite effects on the probability of sexual intercourse. Young women who earned an income are 51% less likely than those who did not to engage in sexual intercourse, while those who received any money or gifts from their male partners are 2.3 times more likely than those who did not receive anything. Similarly, those who reported entering the relationship primarily for money, gifts, or assistance are 1.9 times more likely to engage in sex than those who were not motivated in this way.

Model 2 shows that every Ksh 1000 earned by a young women is associated with a 20% decline in the likelihood of having sex, and this is a statistically significant result. The amount of material transfers received is not associated with having sex. In this model, those motivated by transfers are 2.1 times as likely to have sex in their relationships as those who were not motivated in this way; this is also statistically significant.

Before turning to the control variables, we review the results for the associations between the employment and transfers variables and consistent condom use in the first month of relationships. In both models, employment and income are positively and significantly associated with consistent condom use. Being employed increases the likelihood of consistent condom use threefold (marginally significant), while every Ksh 1000 earned increases the odds 1.7 times. The receipt of any transfer is not associated with consistent condom use, while every Ksh 1000 received from a male partner decreases the likelihood by 11%, which is a statistically significant result.

The results for the controls are largely in the expected directions, though some important distinctions are raised with regard to the two outcomes. Respondent age is not significantly correlated with engagement in sexual activity but is positively associated with consistent condom use; the age disparity between partners is not significantly related to either outcome. Respondent educational attainment and school attendance significantly decrease the probability of sexual intercourse in the first month of relationships, and school attendance also increases the odds of consistent condom use. Male partners' school attendance is associated with decreased odds of having sex and the highest level of educational attainment is (marginally) associated with consistent condom use. Though the respondent's household economic status is not related to either outcome, young women in relationships with men of high (perceived) economic status are almost four times more likely to use condoms consistently than those in relationships with men of low status. Finally, premarital relationship type is significantly associated with the likelihood of having sex. Young women in dating and casual relationships are significantly less likely than those in fiancé or serious relationships to engage in sexual intercourse. There is no significant association between relationship type and consistent use of condoms, however.

Multivariate Results: Last Relationship-month

We examine the correlates of sexual behavior outcomes for the last month of relationships in Table 4. The sample size for having sex decreases slightly compared to first relationship-months in Table 3 due to missing values for several observations, while the sample size for condom use increases because a larger proportion of last relationship-months included sexual intercourse.

The results in both models show that employment and income are not significantly associated with having sex in the last month of the relationship. We see in Model 1 that the receipt of any transfer has a positive and highly significant effect on the likelihood of having sex, although the amount of material transfers does not in Model 2. Those who received any money, gifts, or assistance are 4.5 times more likely to have sex than those who did not. In Model 2, motivations of money, gifts, or assistance for remaining in the relationship show a marginally significant association (odds ratio 1.7) with engaging in sexual intercourse.

With respect to consistency of condom use, while employment has no significant association with the likelihood of having sex in Model 1, income is significant in Model 2. Every Ksh 1000 earned is associated with a 22% increase in the likelihood of using condoms consistently. With respect to material transfers, in Model 1, the receipt of transfers is not associated with the outcome, while the value of transfers is in Model 2. Every Ksh 1000 received in material transfers decreases the likelihood of sexual intercourse by five percent (marginally significant). Motivations for entering the relationship due to money, gifts, or assistance are not significant in either model.

Very few of the individual-level controls are significantly related to either outcome in the last month of the relationship over and above the income and transfers variables. The only significant predictors are respondent school attendance, which decreases the likelihood of sexual intercourse, and the perceived economic status of the male partner, which increases the likelihood of consistent condom use. Partnership-level controls appear to be more consequential in later stages of relationships. Young women in dating and casual relationships are still significantly less likely to engage in sexual intercourse than those in serious and fiancé relationships. Those in casual relationships are also more likely to consistently use condoms at this stage (marginally significant). Relationship duration has a marginally significant negative effect on having sex in the last month, but no significant association with consistent condom use. We also find that relationships that ended in marriage are significantly more likely to include sexual intercourse and are significantly less likely to entail consistent condom use than relationships that came to an end, and that consistent condom use is significantly more likely in relationships that were ongoing at the time of the survey.

DISCUSSION

This paper examined the effects of women's employment and material transfers from male partners on sexual behavior in premarital relationships in urban Kenya. Consistent with a bargaining perspective, we find significant associations between young women's economic resources and sexual activities. We also find strong evidence that the *nature and source* of these

resources are immensely consequential: economic resources received from employment and from partners have opposing effects, with income increasing the likelihood of sexual behaviors that are safer for young women and the receipt of transfers decreasing it. In addition, our results suggest that simply receiving *any* income from employment is not always sufficient to increase young women's bargaining power; the level of income is also crucial, with larger earnings affording greater power. These findings echo feminist research, which argues that economic participation itself does not necessarily translate into decision-making power for women, particularly for women in low-paying occupations. The results also suggest that norms related to male power in sexual decision-making are not so strong in this African context as to limit bargaining in this arena, at least in young women's relationships before marriage.

Our analysis is among the first to examine changes in the determinants of sexual behavior over the course of relationships. In the first month of young women's premarital relationships, it appears that a substantial amount of bargaining occurs related to sexual intercourse. Both employment and the level of income are associated with significant decreases in the likelihood of having sex, suggesting that young women use bargaining power gained through their own income to delay the initiation of intercourse. The receipt of transfers (but not the amount) influences the likelihood of having sex in the opposite direction. Thus, regardless of the size of transfers, receiving any money, gifts, or assistance from a male partner is positively associated with having sex. In addition, independent of whether transfers are actually received, simply being motivated by transfers to engage in the relationship also increases the likelihood of having sex. In contrast, in the last month of young women's premarital relationships, neither employment nor income is associated with the likelihood of sexual intercourse, though receipt of any transfers continues to have a large positive effect.

With respect to consistent condom use, we find that, among those who had sex in the first month of the relationship, employment and income are significantly associated with the outcome, while only the level of transfers has a significant effect. This same process appears to continue in the last month of relationships, where income has a positive effect on consistent condom use and the amount of transfers has a negative effect. These findings suggest that bargaining over consistent condom use may continue over the course of premarital relationships. Young women appear to continue to prefer this behavior and to use negotiating power gained through their income to ensure that it occurs.

Numerous qualitative studies have described the complexity of transactional sex in Africa (e.g., Kaufman & Stavrou, 2004; Poulin, 2007), and these analyses provide an alternative explanation for the observed associations between material transfers and sexual behavior outcomes that we uncover. It could be that men who love and trust their female partners show these affections by giving more material transfers, and these are also the types of relationships where condom use is less consistent (Tavory and Swidler, 2009). It is entirely possible that many relationships contain both transactional and affective elements (Hunter, 2007), particularly at later stages and in more serious relationships; however, this explanation on its own cannot explain the finding that young women's income has the opposite effect on condom use. This effect is consistent with the bargaining perspective we have developed in this study.

The analysis in this paper and our findings also identify additional areas of research. First, we

focused our analysis on premarital relationships, and, for those that progressed to marriage, the premarital portion only. One area of future research would be to study changes in bargaining power before and after marriage. Our results suggest that young women have power to insist on condom use at earlier and later stages of premarital relationships, but this situation could change dramatically once women enter marriage. In contrast to nonmarital relationships, which women can generally terminate at will (Luke, 2003), marriage is essentially a permanent arrangement in much of sub-Saharan Africa. This weakens women's options and hence fallback position. Combined with a new set of norms regarding husbands' decision-making power within marriage, newly married women may have very little control over sexual activities, including condom use (Smith, 2001; Wolff et al. 2000).

Second, the fact that our unique calendar data include detailed information on two separate sources of economic resources—individual income and material transfers from male partners—allowed us to uncover evidence of bargaining over sexual decision-making in premarital relationships. With these data we could not, however, explore the actual *process* of bargaining between partners, as has been the case in a range of qualitative studies of marital unions (e.g., Kabeer, 1997; Kantor, 2003; Tolhurst, Amekudzi, Nyonator, Squire, & Theobald, 2008). It would be particularly interesting to explore how these different types of economic resources are controlled and allocated when they are earned and exchanged outside of shared households.

Finally, our study has implications for policies and programs related to the HIV/AIDS epidemic in sub-Saharan Africa. The results suggest that strategies to stem the spread of the disease need to move beyond a focus on the proximate determinants of HIV infection, including condom promotion, abstinence education, and individual behavior change, toward a wider focus on socioeconomic factors. We find that income gained from employment is associated with refusing sexual activity in the early stages of partnerships as well as negotiating consistent condom use at both earlier and later stages of relationships. The young women in our sample earned income in less than one-fifth of relationship-months, however, while they received money, gifts, or other material assistance from their male partners in the great majority. Increased levels of employment and income would likely decrease many young women's need to engage in transactional sex while simultaneously increasing their power to negotiate safe sexual behaviors within their relationships.

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Table 1

Economic Variables, First and Last months of Premarital Relationships, Females Ages 18-24, Kisumu, Kenya

	First month		Last month	
	% or Mean	SD	% or Mean	SD
Employment				
Earned income	12.3		19.1	
Amount earned (Ksh)	446.8	2118.8	700.5	2302.4
Transactional sex				
Transfers received				
Received money/gifts/assistance	69.4		60.5	
Amount received (Ksh)	799.0	3397.6	848.5	3656.4
Transfers given				
Gave money/gifts/assistance	21.5		17.7	
Amount given (Ksh)	76.6	431.7	47.5	328.4
Money/gifts/assistance is main or secondary reason for engaging in relationship	19.1		20.1	
N	503		493	

Note: US$1=Ksh70 at the time of the survey

Table 2

Summary Statistics, First and Last Months of Premarital Relationships, Females Ages 18-24, Kisumu, Kenya

	First month	Last month
	% or Mean	% or Mean
Respondent characteristics		
Age	17.2	18.7
Level of education		
None/primary	37.2	30.4
Secondary/university	62.8	69.6
Currently in school	58.7	37.9
High economic status (vs. medium or low)	45.3	45.6
Partner characteristics		
Level of education		
None/primary	20.9	19.3
Secondary	60.6	58.6
Post-secondary	18.5	22.1
Currently in school	69.4	63.1
High economic status (vs. medium or low)	20.7	22.1
Relationship characteristics		
Age difference	4.5	4.5
Relationship type		
Fiancé/serious	20.9	46.5
Dating	57.9	35.5
Casual/other	21.3	18.1
Duration (months)	--	18.0
Relationship status in last month		
Relationship ended	--	60.2
Relationship is current	--	27.4
Relationship ended in marriage	--	12.4
Sexual behavior outcomes		
Had sexual intercourse	33.6	40.8
Condom use (among those who had sex)		
Always	36.6	33.2
Most of the time	3.5	2.8
Sometimes	12.2	10.4
Rarely	2.3	3.8
Never	45.4	49.8
N	503	493

Table 3

Logistic Regression Analysis of Sexual Activities in the First Month of Premarital Relationships, Females Ages 18-24, Kisumu, Kenya

	Had sexual intercourse				Used condoms consistently			
	Model 1		Model 2		Model 1		Model 2	
	Odds ratio	R.S.E.	Odds ratio	R.S.E.	Odds ratio	R.S.E.	Odds ratio	R.S.E.
Employment								
Earned income	0.49*	0.17			3.10†	1.95		
Amount earned (Ksh/1000)			0.80**	0.06			1.69**	0.32
Material transfers								
Received money/gifts/assistance	2.29**	0.58			1.17	0.70		
Amount received (Ksh/1000)			1.22	0.16			0.89*	0.06
In relationship for money/gifts/assistance	1.85*	0.51	2.07**	0.57	0.41	0.23	0.36†	0.22
Respondent characteristics								
Age	0.98	0.07	0.94	0.07	1.51**	0.21	1.59**	0.23
Level of education (ref: none/primary)								
Secondary or above	0.41**	0.14	0.45*	0.14	0.85	0.51	0.81	0.49
Currently in school	0.45**	0.13	0.45**	0.13	2.62*	1.22	2.27†	1.02
High economic status (ref: medium or low)	0.99	0.27	0.92	0.24	0.50	0.22	0.48	0.22
Partner characteristics								
Level of education (ref: none/primary)								
Secondary	1.54	0.43	1.61†	0.46	1.01	0.52	1.00	0.51
Post-secondary	1.64	0.70	1.73	0.77	3.22†	2.09	3.52†	2.48
Currently in school	0.45**	0.11	0.41***	0.10	2.13	0.99	2.40†	1.12
High economic status (ref: medium or low)	1.24	0.32	1.17	0.32	3.93**	2.01	4.35**	2.34
Relationship characteristics								
Age difference	1.03	0.03	1.02	0.03	0.98	0.04	0.99	0.05
Relationship type (ref: fiancé/serious)								
Dating	0.57*	0.16	0.50*	0.14	0.72	0.32	0.72	0.31
Casual/other	0.45*	0.15	0.40**	0.13	2.14	1.24	1.97	1.17
N	503		503		169		169	

Note: R.S.E. = robust standard error

†p < .10 *p < .05. **p < .01. ***p < .001.

Table 4

Logistic Regression Analysis of Sexual Activities in the Last Month of Premarital Relationships, Females Ages 18-24, Kisumu, Kenya

	Had sexual intercourse				Used condoms consistently			
	Model 1		Model 2		Model 1		Model 2	
	Odds ratio	R.S.E.	Odds ratio	R.S.E.	Odds ratio	R.S.E.	Odds ratio	R.S.E.
Employment								
Earned income	1.05	0.30			1.79	0.83		
Amount earned (Ksh/1000)			1.00	0.05			1.22*	0.10
Material transfers								
Received money/gifts/assistance	4.50***	1.05			0.65	0.33		
Amount received (Ksh/1000)			1.09	0.07			0.95†	0.02
In relationship for money/gifts/assistance	1.30	0.36	1.65†	0.44	1.01	0.49	1.01	0.48
Respondent characteristics								
Age	1.04	0.06	1.05	0.07	1.03	0.10	1.03	0.10
Level of education (ref: none/primary)								
Secondary or above	0.74	0.22	0.72	0.22	1.63	0.76	1.74	0.83
Currently in school	0.54*	0.14	0.55*	0.14	0.98	0.47	0.98	0.46
High economic status (ref: medium or low)	0.86	0.21	0.91	0.22	0.95	0.37	0.95	0.37
Partner characteristics								
Level of education (ref: none/primary)								
Secondary	1.10	0.31	1.04	0.28	1.21	0.60	1.20	0.60
Post-secondary	1.04	0.38	0.99	0.37	1.75	1.05	1.55	0.97
Currently in school	0.75	0.18	0.73	0.17	0.66	0.26	0.68	0.27
High economic status (ref: medium or low)	1.37	0.38	1.42	0.36	2.45*	1.01	2.29*	0.95
Relationship characteristics								
Age difference	0.99	0.03	0.99	0.03	1.05	0.04	1.05	0.04
Relationship type (ref: fiancé/serious)								
Dating	0.50**	0.12	0.44***	0.10	1.48	0.59	1.59	0.64
Casual/other	0.57*	0.16	0.54*	0.15	2.50†	1.21	2.60†	1.32
Duration (months)	0.99†	0.01	0.99†	0.01	0.99	0.01	0.99	0.01
Relationship status (ref: relationship ended)								
Relationship is current	0.85	0.22	0.86	0.23	2.59*	1.07	2.82*	1.18
Relationship ended in marriage	2.19*	0.83	2.04†	0.77 †	0.03**	0.04	0.03**	0.04
N	493		493		201		201	

Note: R.S.E. = robust standard error

†p < .10 *p < .05. **p < .01. ***p < .001.