



Original article

Developing Experimental Vignettes to Identify Gender Norms Associated With Transactional Sex for Adolescent Girls and Young Women in Central Uganda


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 A B S T R A C T

Purpose: Transactional sex or informal sexual exchange relationships increase adolescent girls' and young women's (AGYW) HIV and pregnancy risk in sub-Saharan Africa. These relationships are grounded in the shared expectation that men should provide financial support to their partners. We built a vignette experiment to assess whether gender norms influenced by expectations of provision help to explain how transactional sex increases AGYW's sexual and reproductive health risks.

Methods: We used mixed methods to develop a vignette experiment in Central Uganda with AGYW including 10 focus group discussions, 32 cognitive interviews, and a pilot survey experiment with 108 sexually active unmarried AGYW. Respondents were randomly assigned to one of the two manipulations for three vignettes. The vignettes examined whether the amount a man provided changed perceived social approval of men's authority in relationships, sexual decision-making power, or women having multiple partners.

Results: We find that a higher level of male provision is associated with higher levels of perceived community approval for his sexual decision-making power ($p < .001$) and lower levels of perceived peer approval for AGYW's to seek a second partner ($p < .05$). We also find that higher levels of male provision are associated with respondent's own approval of male authority and sexual decision-making.

Conclusion: Our findings suggest that approval of men's sexual decision-making power increases when they provide more and that girls who seek a second partner find higher levels of social approval for this behavior when their primary partner provides less. Vignette experiments may be valuable for identifying social norms that put AGYW's sexual and reproductive health at risk.

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 IMPLICATIONS AND CONTRIBUTION

This study uses a vignette experiment to show evidence that social norms may influence some of the sexual and reproductive health risks adolescent girls and young women face when they engage in informal sexual exchange relationships or transactional sex.

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Transactional sex relationships are informal sexual exchange relationships that are distinct from sex work and based on the implicit assumption that sex will be exchanged for material benefit or status. Partners identify as girlfriends and boyfriends and not as sex workers and clients [1]. In sub-Saharan Africa (SSA), transactional sex relationships are associated with an increased risk of HIV and pregnancy for adolescent girls and young women (AGYW) [1–3]. A recent comprehensive review from the region conceptualized transactional sex relationships as structured by both economic and gender inequalities, occurring in contexts ranging from absolute poverty to those marked by stark income inequality [1]. AGYW's motivations for engagement in these relationships range from fulfilling basic needs to aspirations to live a global middle-class youth lifestyle [1].

While studies from SSA have been able to account for socioeconomic factors (e.g. household wealth, education) when assessing the association between transactional sex relationships and sexual and reproductive health (SRH) outcomes, quantitative measures of gender inequality have been examined less often. We conceptualize gender as “[a] multilevel system of difference and inequality...[that] involves cultural beliefs and distributions of resources at the macrolevel, patterns of behavior and organizational practices at the interactional level, and selves and identities at the individual level” [4] (pp. 510–511). At the macrolevel, transactional sex is structured by a widely held gender belief system that men are expected to provide financial support to their partners, who in turn are expected to offer domestic and sexual services [5]. This belief system may in turn generate gender norms maintained at the interactional level (i.e., within interpersonal relationships), which are then internalized at an individual level [1].

With notable exceptions [6,7], most studies from SSA that have quantitatively assessed the role of gender inequality in transactional sex have done so by addressing relationship dynamics [8–10] but not the norms or beliefs that structure or reinforce such dynamics. Such measures may help delineate how transactional sex increases AGYW's SRH risks (e.g., pregnancy or HIV). Transactional sex has an independent association with HIV not explained by partner age disparity or other expected mediators [8,11] and an independent influence on adolescent pregnancy [3]. The literature emphasizes the centrality of the “male provider role” in transactional sex relationships [1,8,12–14]. Male provision is potentially tied to socially regulated behaviors—or norms—that could affect AGYW SRH risks through at least three domains. First, provision has been associated with ideas of “hegemonic masculinity” or the dominant form of masculinity practiced in a given context that serves to reproduce gender inequality and suppress other ways of being a man [15]. Through this lens, provision can be seen as a mechanism to attract and control female partners to demonstrate male “success” [8,13,14], and relationship control may, therefore, be socially expected and accepted in the context of provision. Second, male provision may be linked to assumptions about sexual decision-making power. The expectation that women should offer sexual and domestic labor in return for male provision may be interpreted as men having the right to sex when and how they want [16]. Third, male provision may be linked to women having multiple partners. Women who initiate relationships with men to access resources (referred to as plucking the chicken, skinning the goat, or ripping the pocket, depending on the setting) [17–20] benefit from the expectation that men should provide in sexual relationships; therefore, they may champion this expectation. To benefit from the expectation that men should provide, it may be important to have more than one partner who can provide

[21–24]. It is unclear if it is becoming more socially acceptable for women to pursue multiple partners in the event of inadequate financial support.

In this study, we will assess whether these domains attached to expectations of provision are normative. Social norms are socially regulated rules or expectations about behavior, which are enforced by relevant reference groups (social groups who uphold a given norm and shame those who fail to do so) [16]. Gender norms are social norms that regulate what is deemed appropriate masculine and feminine behavior in a given social context [25]. In measuring social norms, it is important to capture the descriptive norms (the perceived extent to which a socially regulated behavior is practiced), the injunctive norms (the extent to which there is a shared expectation that the behavior ought to be practiced) [26], and the reference group in which the norms are upheld [27].

In this pilot study, we developed measures to identify and quantitatively assess social norms using vignettes in a vignette experiment. Vignette experiments present short stories that can be manipulated in multiple ways to test combinations of factors that may influence beliefs or normative expectations [28]. For our vignette experiment, we present stories that differ (or are manipulated) by the amount the man provides to his partner in the story, as provision is central to all transactional sex relationships. The main objective of our vignette experiment is to test whether there are gender norms that stem from the expectation that men should provide in relationships. Specifically, we are interested in understanding if the level of male provision affects key reference group members' level of approval for relationship behaviors including a man's authority over a partner, his power over sexual decision-making, or a woman having multiple sexual partners. We hypothesize that with higher levels of provision, there will be higher levels of approval for men's authority in relationships and sexual decision-making power. We also assess evidence of emerging social norms around women's sexual agency. Namely, we explore whether the level of male provision influences the level of social approval for a woman having multiple partners.

Methods

Methodological approach

Vignette experiments facilitate examination of complex social processes not easily assessed through standard survey instruments and are, therefore, well suited to measuring social norms [16,29]. In addition, vignette experiments reduce social desirability bias in at least two ways: first, vignettes reference the lives of others, rather than the respondent, allowing respondents to address sensitive topics more easily [30]. Second, the experiment obscures what is being tested. For example, a vignette that tells the same story, but describes a man as the main actor to 50% of the study population and a woman to the other 50%, will be able to examine the role of gender in respondents' judgment of the vignette without respondents' awareness of this study objective [28–30]. Vignette experiments have been used to test gender norms and expectations [31–33], including a relevant study of the normative influence of bride wealth payment on women's reproductive autonomy [16], the only other vignette experiment in SSA of which we are aware. We report on the results of three vignettes that have bearing on AGYW's SRH.

Study setting and sampling frame

Our vignette experiment was developed and pilot tested by a small research team over four phases in the capital city of

Kampala and rural communities in the Masaka district of Uganda (located 140 kilometers southwest of Kampala) in 2017–2018. We chose these settings given recent extensive formative research coauthors had conducted on transactional sex in these sites, and because studies indicate the range of motivations for engaging in transactional sex in Uganda are similar to those found across other settings in SSA [34–39]. Our data collection focused on unmarried 15- to 24-year-old AGYW who had ever had sex. Given their increased SRH risk of HIV and unintended premarital childbearing, this population represents the target demographic for the measures we were developing. Data collection and analysis activities included (see Table 1) the following: analysis of secondary qualitative data (phase 1), 10 focus group discussions with six to eight AGYW per group (phase 2), two rounds of 16 cognitive interviews (phase 3), and a pilot survey (phase 4). The sample for phases 2–4 was stratified by district (Kampala and Masaka) and age (15–19; 20–24) to capture any regional or age group differences in social norms. Within Kampala, we also captured differences in socioeconomic status, sampling from both lower and middle-income communities. Finally, in each district, we also purposively sampled from venues associated with transactional sex (nightclubs, bars, universities) to facilitate assessment of any differences in perceived norms by reported practice of transactional sex.

The pilot vignette experiment ($n = 108$) was administered by six qualified female enumerators in the local Luganda language. In each district, the community-based sample ($n = 78$) comprised four randomly selected lowest administrative units within two purposively selected subcounties. Within each administrative unit, we randomly selected households with potentially eligible respondents and conducted interviews in or near their homes. For the venue-based sample ($n = 30$), we used convenience sampling to identify eligible participants.

Data and methods

In phase 1, we conducted secondary analysis of qualitative data collected by a subset of coauthors (N.K., J.M.) for a project that had examined the intersection between transactional sex and sexual exploitation in the same study settings. These data were used to draft the initial vignettes presented in phase 2. The focus group discussions (FGDs) in phase 2 provided the basis for vignette development and the identification of relevant reference groups. Themes included social influences on sexual relationships, progression of romantic relationships, and the role

of male provision in relationships. Participants were also asked to assess and build upon formative versions of three vignettes. We then used cognitive interviews (phase 3)—a qualitative survey development method used to assess whether subjects comprehend survey questions as intended [40,41]—to refine vignettes and perform checks on response categories and internal experimental realism. Internal experimental realism refers to the extent to which participants “hear” the manipulation amidst other details provided in the vignette [29]. We tested this by presenting subjects with both manipulations of each vignette (see Table 2) and assessed whether they recognized the distinction and if the manipulation was featured in their explanation of their perceived approval or disapproval of the behaviors portrayed in the vignette. We also assessed if the vignette was realistic and relatable across district, age, and socioeconomic status.

We administered the survey vignette experiment in one-on-one face to face interviews. Questions and vignettes were read aloud to the respondent, and the interviewer recorded responses on tablets using the ODK platform (phase 4). Given the small scope of this pilot survey, we built an experiment with a two by one factorial design—each vignette had two manipulations, differing by level of provision. This design allowed adequate statistical power to detect differences across manipulation. The vignette experiment was programmed using a random number generator with a 50% probability that a respondent would receive either manipulation of each vignette. For each vignette, we assessed the respondent's attitude about the behavior being portrayed, as well as their perceptions of their friends, and the broader community's approval (injunctive norm) using a four-point Likert-type scale (strongly disapprove, disapprove, approve, strongly approve). To assess perceived prevalence of a given behavior (descriptive norm), we asked how many individuals in their community, on a scale of 0–10, would behave as the person had in the vignette. We also collected data on sociodemographics and sexual behavior. See Appendix 1 for the vignette experiment and measures of transactional sex.

Analysis

Vignette development was highly iterative, with analysis, discussion, and refinements being made within and between research phases. For phases 1 and 2, we brought the transcribed and translated textual data files in to ATLAS.ti for coding, led by K.S. For phase 1, the data were coded inductively for emergent

Table 1
Data collection activities, vignette experiment, 2017–2018

Research phase	Sample size and method	Sample frame	Purpose
Phase 1—secondary data analysis	20 FGDs 40 IDIs	- AGYW aged 14–24 years - Men aged 18–35 years - Kampala and Masaka	Previously collected data on TS used to identify initial vignette scenarios
Phase 2—focus group discussions	10 FGDs	- AGYW aged 15–24 years - Stratified by district (Kampala and Masaka)	Build vignettes, identify reference groups
Phase 3—cognitive interviews	32 semistructured interviews, two rounds	- AGYW aged 15–24 years - Stratified by district	Refine vignettes, checks on realism, manipulation
Phase 4—pilot survey vignette experiment	108 structured interviews	- AGYW aged 15–24 years - Stratified by district and age group - 78 community based - 30 venue based - Random assignment to vignette manipulation	Pilot test the vignette experiment

AGYW = adolescent girls and young women; FGD = focus group discussion; IDI = in-depth interview; TS = transactional sex.

Table 2

Experimental vignettes used to examine social norms associated with male provision

<p>Male provision and authority in relationships (vignette A)</p> <p>Cate and Paul have been in a relationship for three months. Cate is 17 and in school and Paul is 20 and working.</p> <p>Manipulation 1: —</p> <p>Manipulation 2: Paul has been providing Cate with clothes and money to buy things that are important to her.</p> <p>Last week, Cate went out to have fun with a group of her friends without Paul. Paul learned about it, and then told Cate she should never go out with her friends without his permission.</p>
<p>Male provision and sexual decision-making power (vignette B)</p> <p>John and Sarah have been in a relationship for some time.</p> <p>Manipulation 1: He has been providing Sarah with a little money for her to buy clothes, and airtime.</p> <p>Manipulation 2: He has been providing Sarah with things important to her; he has given her a smart phone and gives her any money she says she needs.</p> <p>Last week, he asked to have sex with her for the first time, but she said no. John becomes angry with her.</p>
<p>Women's engagement with multiple partners for male provision (vignette C)</p> <p>Stella and Stephen are in school together and have been together for over a year. They love each other.</p> <p>Manipulation 1: Stephen is only able to sometimes buy snacks for Stella.</p> <p>Manipulation 2: Stephen has been giving her money in addition to buying her snack every day.</p> <p>Yet, Stella needs (more) money to be able to buy trendy clothes so she can fit in with her friends, so she found a second boyfriend to support her.</p>

themes concerning judgment or approval of behaviors associated with transactional sex or male provision. For phase 2, data were coded deductively and inductively toward the refinement of initial vignettes and the development of new vignettes as based on FGD findings. The cognitive interviews were analyzed iteratively, within and between rounds, using textual matrices for data reduction and comparison. We used findings from round one to inform changes to the vignettes that we tested in round two. The pilot survey data were brought into Stata (version 14) for analysis. We used regression analysis to predict each indicator of attitudes and perceived norms, first by vignette manipulation alone. These unadjusted models tested whether varying the amount of male provision in the vignette led to differences in the mean response. We then accounted for sample design variables (age group, district, venue) in adjusted models and practice of transactional sex (discussed, not shown).

Ethical considerations

The research protocol was reviewed and approved by the Mildmay Uganda Research Ethics Committee, the Uganda National Council on Science and Technology and the American University Institutional Review Board.

Results

Formative findings toward building a vignette experiment

Our analysis of previously collected qualitative data (phase 1) confirmed findings from the literature with respect to how important provision is for a man's identity. Men and women both confer higher status on men who provide for their partners and associate a man's ability to provide for his partner with succeeding as a man. In addition, both AGYW and men described an increased prevalence of women who have a romantic partner for love and a second, concurrent partner for money alone. Specific examples of relationship experiences were drawn from the in-depth interviews and were used to create the initial vignettes discussed within phase 2 FGDs.

The FGDs with AGYW (phase 2) identified relevant reference groups for AGYW pertaining to their romantic and sexual relationships. Across all FGDs, friends and members of the broader neighborhood or village (hereafter "community") were described

as having an important role in regulating behavior with respect to premarital relationships. Participants generally described men as the expected authority figure in heterosexual relationships but debated the aspects of a woman's life over which her partner should expect to hold decision-making power (e.g. who she spends time with, what she wears) and whether this was healthy. The FGDs also underlined the importance of male provision for men's sexual decision-making power and authority. Participants were asked to describe the evolution of a relationship, to which we then introduced male provision. We found participants responded by removing decision-making power from the young woman, in general and specifically with respect to sex. Finally, there was considerable debate over whether and under what circumstances it was acceptable to seek an additional partner for support.

During cognitive interviewing (phase 3), we found that participants recognized differences across the vignette manipulations and reflected on the importance of different levels of provision in their assessment of the vignette. Furthermore, we learned that the level of provision needed to be presented in subjective terms to make it relatable across socioeconomic status. We also noted that participants responded to the school-based vignette with incredulity if we presented the male student as able to provide more than modest material support. Finally, we eliminated one vignette experiment after determining that the manipulation was too unrealistic.

Results of the pilot vignette experiment

A description of the sample for the pilot vignette experiment (phase 4) is presented in Table 3. The mean age of first sex was 16.6, and in the last 12 months, 91.7% report having had sex, 48.2% reported having practiced transactional sex, and 27.8% reported having had two or more sexual partners. These percentages are higher than would be expected among the general population of AGYW in these settings.

In Table 4, we present the descriptive norm, injunctive norms, and respondent's own attitude overall and by vignette manipulation for each vignette, based on regression coefficients. Overall, we find high perceived prevalence of each behavior (descriptive norm), regardless of provision. For vignette A, we find limited evidence that male provision influences normative expectations about men's authority over their partner's daily life decisions.

Table 3

Selected characteristics for 15- to 24-year-old sexually active, nonmarried respondents of the vignette experiment, Uganda, 2018

	15- to 24-year-old women (n = 108)
	N (%) or mean
Sample	
District	
Kampala	54 (50.0)
Masaka	54 (50.0)
Sample frame	
Venue ^a or university based	30 (27.8)
Community based	78 (72.2)
Sociodemographics	
Completed years of education	
Up to lower secondary (senior 2)	45 (41.7)
Lower secondary and higher	63 (58.3)
Completed years of age	
15–19	50 (46.3)
20–24	58 (53.7)
Mean age	19.9
Sexual behavior	
Mean age at first sex	16.6
Practiced transactional sex in the last 12 months	52 (48.2)
2+ sexual partners in the last 12 months	30 (27.8)

^a Nightclubs, bars, and video parlors.

Respondents were just as likely to indicate that a man would require his female partner to obtain his permission before going out with friends, regardless of whether or not he was providing her with clothes and money. Respondents' assessment of the extent to which friends or the community would approve of the man's authority over his girlfriend varied by gender, but not by manipulation. Respondents' own attitudes concerning male

authority, however, were affected by whether or not he provided support: respondents shifted to generally approving of his authority when he provided for his partner ($p < .05$).

For vignette B, we find some evidence that the value of a man's financial support to his partner is associated with the level of social approval for his sexual decision-making power. Respondent's perceived that the community would approve more of a man who expressed anger at his female partner's refusal to have sex with him if he had provided her with more support ($p < .001$); however, respondents perceived high levels of approval among his friends, regardless of the level of his provision. In addition, the descriptive norm did not vary significantly by provision level. That said, respondent's own mean levels of approval (attitude) were low but raised if he had provided more ($p < .05$).

We also find some evidence that higher provision by a primary male partner is associated with lower approval of the female partner obtaining a second boyfriend to support her needs, as shown in vignette C of Table 4. The average level of respondents' perceived approval by both the female partner's friends and her peers (i.e., classmates) was lower in the higher provision manipulation of the vignette ($p < .05$). Although not statistically significant, there was a similar trend in the descriptive norm, by provision level. Neither respondents' own attitudes nor their perception of the broader community's level of approval were responsive to levels of provision. When adjusting for transactional sex (not shown), manipulation effects on peers' and friends' approval were diminished. To examine this further, we ran *t* tests following unadjusted models stratified by transactional sex and found respondents who had practiced transactional sex were themselves much more likely to approve of having multiple partners ($p < .000$) and were more likely to expect friends ($p < .10$) and peers ($p < .05$) to approve of this practice, regardless of male provision. Adjusting for transactional sex did not change the significance or direction of results for other vignettes.

Table 4

Effects of vignette manipulation (2 vs. 1) on attitudes, descriptive norms, and injunctive norms among 15- to 24-year-old adolescent girls and young women in Kampala and Masaka districts, Uganda

		Mean score (SD)			Unadjusted difference	Adjusted difference
		Overall	M 1	M 2		
Men's relationship authority (vignette A)						
Att	Respondent's own approval of Paul	2.76 (1.09)	2.55 (1.12)	2.98 (1.03)	.44	** .41 *
DN	Perceived no. of men (out of 10) who would behave like Paul	7.56 (2.31)	7.47 (2.32)	7.66 (2.31)	.19	.26
IN	Respondent's perception of Cate's friends' approval of Paul	1.72 (.87)	1.76 (.86)	1.68 (.89)	-.08	-.08
IN	Respondent's perception of Paul's friends' approval of Paul	3.42 (.83)	3.36 (.85)	3.47 (.82)	.11	.12
IN	Respondent's perception of community approval	2.57 (1.08)	2.55 (1.14)	2.60 (1.03)	.06	.07
Men's sexual decision-making power (vignette B)						
Att	Respondent's own approval of John	2.13 (1.03)	1.91 (.99)	2.37 (1.02)	.46	** .48 **
DN	Perceived no. of men (out of 10) who would behave like John	7.99 (2.41)	8.16 (2.02)	7.80 (2.78)	-.35	-.19
IN	Respondent's perception of John's friends' approval of John	3.49 (.75)	3.46 (.76)	3.53 (.76)	.07	.05
IN	Respondent's perception of community approval	2.32 (.91)	2.04 (.84)	2.65 (.87)	.61	*** .54 ***
Women and multiple partners (vignette C)						
Att	Respondent's own approval of Stella	2.36 (1.09)	2.36 (1.14)	2.37 (1.03)	.01	-.05
DN	Perceived no. of girls (out of 10) who would behave like Stella	7.63 (2.06)	7.92 (2.01)	7.29 (2.09)	-.63	-.62
IN	Respondent's perception of Stella's friends' approval	3.46 (.65)	3.58 (.59)	3.33 (.69)	-.25	-.25 *
IN	Respondent's perception of Stella's peers' approval	3.32 (.77)	3.49 (.62)	3.12 (.88)	-.37	** -.38 **
IN	Respondent's perception of community approval	2.14 (.87)	2.20 (.91)	2.06 (.83)	-.14	-.10

* $p < .10$, ** $p < .05$, *** $p < .01$.

Scales for Att and IN: 1 = completely disapprove, 2 = disapprove, 3 = approve, 4 = completely approve. Scale for DN: Numeric from 0 or none, to 10 or all.

The adjusted difference is derived from a regression model with controls for age (20–24 vs. 15–19), site (Masaka vs. Kampala), and sample (venue based and university based vs. community based).

Att = respondent's own attitude; DN = descriptive norm; IN = Injunctive norm; M = manipulation; SD = standard deviation.

Discussion

In this small pilot study, we built a two by one factorial design vignette experiment to assess evidence of social norms extending from a gender expectation central to transactional sex relationships—that men should provide for their partners. We found higher levels of perceived community approval for men holding sexual decision-making power when a partner provides more and found lower levels of perceived friends' and peers' approval of young women seeking a second partner when the primary partner provides more. We, therefore, find some evidence that male sexual decision-making power and women's seeking of a second partner are subject to social regulation, conditioned on provision.

Vignette experiments provide some key advantages in measuring social norms. Because the manipulation was not revealed to respondents, and was not about the respondent's own life, the experiment may have reduced social desirability bias [28,29]. Vignette experiments also avoid “third omitted variable” bias—by including a manipulation about provision, the differences in respondent's judgments can be attributed specifically to the level of provision [29]. These advantages are important for measuring complex social phenomena, particularly those that are difficult for respondents to disentangle themselves and may be so deeply ingrained through gender socialization processes that they themselves may not be able to articulate them.

Vignette experiments are not without limitations, however. Vignettes require a balance between maintaining realism and providing manipulations that are different enough to detect a difference. This was difficult for some of our vignettes and may have prevented us from demonstrating more significant results, alongside having a small and nonrepresentative sample for the purposes of this pilot study. Second, in studies with multiple vignettes with a similar manipulation, it is possible that the respondent becomes attentive to the treatment, which may impact the findings [42]. In future studies, we will randomize the order of the vignette and the manipulation. We were also limited in the number of manipulations we could include, given the small sample size, and in our ability to test these vignettes among both men and women, which will be an important next step. Future research on this topic should expand the factorial design both to be able to assess a wider range in level of provision and to test social approval or sanction for a range of sexual decision-making behaviors (e.g., condom use, coerced sex) or women's sexual agency (e.g., women initiating relationships, age-disparate sex).

In this pilot study, we did not find evidence that perceived social approval for a man's authority over his female partner varied by how much he provided. We did find, however, fairly high levels of approval for men's authority, regardless of provision. These findings likely reflect the extent to which Uganda is a highly patriarchal context where male authority in relationships is expected, regardless of provision, something we could only test well within an experimental vignette. This would suggest that while expectations of male authority over female partners in relationships may put women at risk, this may not be a pathway through which transactional sex contributes additional SRH risk to women.

Consistent with other studies, our results suggest that there is social pressure on women in relationships with men who provide to allow men to make decisions regarding sexual behavior in their relationship. In addition, women perceive men to expect this—respondents suggested that about 8 of 10 men expect to hold

sexual decision-making power in relationships. Our findings add a social norm component to the observation in other studies that while women may express agency in certain aspects of transactional sex relationships, they appear to yield to men specifically in the context of sexual decision-making [19,43–45]. These findings suggest that individual behavior change interventions (e.g., improving sexual negotiation skills) must be supplemented with structural approaches that address unequal gender norms and expectations at the community level and across generation. Although complex, these approaches are feasible, and in Uganda, successful approaches to transforming gender norms around the related issue of gender-based violence have taken place, both with boys and girls in early adolescence [46], and through community-based and activist-led initiatives [47].

Our findings with regard to multiple partners indicated that in the absence of provision, young women perceive their friends and peers may find it socially acceptable for young women to seek an additional partner. This lends support to the epidemiological evidence of an association between transactional sex and multiple partners [48–50]. This finding contributes to understanding pathways between transactional sex and multiple partners; social approval for taking on a second partner is conditioned on the level of provision received from the first. That said, social approval for this practice was far from universal; respondents' own attitudes and perceived community approval were not high. This is likely due to the longstanding double standard in many societies, certainly including religiously conservative Uganda, that associates femininity, but not masculinity, with virtues of submissiveness [51] and premarital chastity [52], and it may reflect memory of Uganda's mid-1990s “zero grazing” HIV prevention campaign that supported a social norm of partner fidelity [53]. The findings regarding perceived peers and friends suggest, however, that this perspective may be changing in certain circumstances among younger women. If having multiple partners is more acceptable, it becomes more imperative to address expectations of gender-based inequalities in sexual decision-making within transactional sex relationships.

Taken together, our findings point to the need for gender transformative interventions that critically address the shared expectation that women should have sex with men in return for their financial support. These efforts should accompany women's economic empowerment interventions and related policy initiatives to reduce the extent to which women must rely on male providers.

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Supplementary data

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References

- [1] Stoebenau K, Heise L, Wamoyi J, et al. Revisiting the understanding of "transactional sex" in sub-Saharan Africa: A review and synthesis of the literature. *Soc Sci Med* 2016;168:186–97.
- [2] Bingenheimer JB, Stoebenau K. The relationship context of adolescent fertility in southeastern Ghana. *Int Perspect Sex Reprod Health* 2016;42:1–12.
- [3] Austrian K, Soler-Hampejsek E, Duby Z, Hewett PC. When he asks you for sex you will never refuse because you will think of his money you have spent: A mixed methods exploration of transactional sex as a driver of pregnancy among adolescent girls in Zambia. Cape Town, SA: International Union for the Scientific Study of Population (IUSSP); 2017.
- [4] Ridgeway C, Correll SJ. Unpacking the gender system: A theoretical perspective on gender beliefs and social relations. *Gend Soc* 2004;18:510–31.
- [5] Kandiyoti D. Bargaining with patriarchy. *Gend Soc* 1988;2:274–90.
- [6] Fielding-Miller R, Dunkle KL, Hadley C, et al. Agency as a mediator in the pathway from transactional sex to HIV among pregnant women in Swaziland: A multigroup path analysis. *J Int AIDS Soc* 2017;20:21554.
- [7] Shannon K, Leiter K, Phaladze N, et al. Gender Inequity norms are associated with increased male-perpetrated rape and sexual risks for HIV infection in Botswana and Swaziland. *PLoS One* 2012;7:e28739.
- [8] Jewkes R, Dunkle K, Nduna M, et al. Transactional sex and HIV incidence in a cohort of young women in the Stepping Stones Trial. *J AIDS Clin Res* 2012;3:158.
- [9] Jewkes R, Morrell R, Sikweyiya Y, et al. Men, prostitution and the provider role: Understanding the intersections of economic exchange, sex, crime and violence in South Africa. *PLoS One* 2012;7:e40821.
- [10] Dunkle KL, Jewkes RK, Brown HC, et al. Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *Lancet* 2004;363:1415–21.
- [11] Ranganathan M, Heise L, Pettifor A, et al. Transactional sex among young women in rural South Africa: Prevalence, mediators and association with HIV infection. *J Int AIDS Soc* 2016;19:20749.
- [12] Casale M, Rogan M, Hynie M, et al. Gendered perceptions of HIV risk among young women and men in a high-HIV-prevalence setting. *Afr J AIDS Res* 2011;10:301–10.
- [13] Dunkle KL, Jewkes R. Effective HIV prevention requires gender-transformative work with men. *Sex Transm Infect* 2007;83:173–4.
- [14] Morrell R, Jewkes R, Lindegger G. Hegemonic masculinity/masculinities in South Africa: Culture, power, and gender politics. *Men Masculinities* 2012;15:11–30.
- [15] Connell RW. *Gender and power*: Stanford, CA: Stanford University Press; 1987.
- [16] Horne C, Dodoo FN-A, Dodoo ND. The shadow of indebtedness: Bride-wealth and norms constraining female reproductive autonomy. *Am Sociol Rev* 2013;78:503–20.
- [17] Hawkins K, Price N, Mussa F. Milking the cow: Young women's construction of identity and risk in age-disparate transactional sexual relationships in Maputo, Mozambique. *Glob Public Health* 2009;4:169–82.
- [18] Maganja RK, Maman S, Groues A, et al. Skinning the goat and pulling the load: Transactional sex among youth in Dar es Salaam, Tanzania. *AIDS Care* 2007;19:974–81.
- [19] Stoebenau K, Nixon SA, Rubincam C, et al. More than just talk: The framing of transactional sex and its implications for vulnerability to HIV in Lesotho, Madagascar and South Africa. *Glob Health* 2011;7:34.
- [20] Selikow TA, Zulu B, Cedra E. The ingagara, the regte and the cherry: HIV/AIDS and youth culture in contemporary urban townships. *Agenda* 2002;17:22–32.
- [21] Bajaj M. Sugar daddies and the danger of sugar: Cross-generational relationships, HIV/AIDS, and secondary schooling in Zambia. *Int Perspect Education Soc* 2009;10:123–43.
- [22] Hunter M. The materiality of everyday sex: Thinking beyond 'prostitution'. *Afr Stud* 2002;61:99–120.
- [23] Schoepf BG. Women, AIDS, and economic-crisis in central-Africa. *Can J Afr Stud* 1988;22:625–44.
- [24] Stark L. Transactional sex and mobile phones in a Tanzanian Slum. *Suomen Antropologi J Finnish Anthropol Soc* 2013;38.
- [25] Ryle R. *Questioning gender: A sociological exploration*. Thousand Oaks, CA: Sage Publications; 2011.
- [26] Cialdini RB, Kallgren CA, Reno RR. A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior. *Adv Exp Soc Psychol* 1991;24:201–34.
- [27] Mackie G, Moneti F, Denny E, et al. What are social norms? How are they measured. UNICEF Working Paper. San Diego: University of California at San Diego; 2012.
- [28] Hughes R, Huby M. The construction and interpretation of vignettes in social research. *Social Work Social Sci Rev* 2012;11:36–51.
- [29] Mutz DC. *Population-based survey experiments*: Princeton, NJ: Princeton University Press; 2011.
- [30] Hughes R, Huby M. The application of vignettes in social and nursing research. *J Adv Nurs* 2002;37:382–6.
- [31] Felmlee D, Sweet E, Sinclair HC. Gender rules: Same-and cross-gender friendships norms. *Sex Roles* 2012;66:518–29.
- [32] Ridgeway CL, Backor K, Li YE, et al. How easily does a social difference become a status distinction? *Gender matters. Am Sociol Rev* 2009;74:44–62.
- [33] Deming ME, Covan EK, Swan SC, et al. Exploring rape myths, gendered norms, group processing, and the social context of rape among college women: A qualitative analysis. *Violence Against Women* 2013;19:465–85.
- [34] Bell SA. Young people and sexual agency in rural Uganda. *Cult Health Sex* 2012;14:283–96.
- [35] Bohmer L, Kirumbira E. Socio-economic context and the sexual behaviour of Ugandan out of school youth. *Cult Health Sex* 2000;2:269–85.
- [36] Hoeffnagel L. Something for something: Understanding transactional sex among Campus girls in Kampala. Utrecht: University of Utrecht; 2012.
- [37] Nyanzi S, Pool R, Kinsman J. The negotiation of sexual relationships among school pupils in south-western Uganda. *AIDS Care* 2001;13:83–98.
- [38] Nyanzi S, Nyanzi B, Kalina B, Pool R. Mobility, sexual networks and exchange among bodobodamen in southwest Uganda. *Cult Health Sex* 2004;6:239–54.
- [39] Sadgrove J. 'Keeping up appearances': Sex and religion amongst university students in Uganda. *J Relig Afr* 2007;37:116–44.
- [40] Collins D. Pretesting survey instruments: An overview of cognitive methods. *Qual Life Res* 2003;12:229–38.
- [41] Miller K. Conducting cognitive interviews to understand question-response limitations. *Am J Health Behav* 2003;27:264–72.
- [42] Marsden PV, Wright JD. *Handbook of survey research*: Bingley, United Kingdom: Emerald Group Publishing; 2010.
- [43] Albertyn C. Contesting democracy: HIV/AIDS and the achievement of gender equality in South Africa. *Fem Stud* 2003;29:595–615.
- [44] Jewkes R, Morrell R. Sexuality and the limits of agency among South African teenage women: Theorising femininities and their connections to HIV risk practices. *Soc Sci Med* 2012;74:1729–37.
- [45] Luke N. Age and economic asymmetries in the sexual relationships of adolescent girls in sub-Saharan Africa. *Stud Fam Plann* 2003;34:67–86.
- [46] Lundgren R, Burgess S, Chantelouis H, et al. Processing gender: Lived experiences of reproducing and transforming gender norms over the life course of young people in Northern Uganda. *Cult Health Sex* 2018;1–17.
- [47] Kyegombe N, Starman E, Devries KM, et al. "SASA! is the medicine that treats violence". Qualitative findings on how a community mobilisation intervention to prevent violence against women created change in Kampala, Uganda. *Glob Health Action* 2014;7:25082.
- [48] Moore AM, Biddlecom AE, Zulu EM. Prevalence and meanings of exchange of money or gifts for sex in unmarried adolescent sexual relationships in sub-Saharan Africa. *Afr J Reprod Health* 2007;11:44–61.
- [49] Phillips-Howard PA, Otieno G, Burmen B, et al. Menstrual needs and associations with sexual and reproductive risks in rural Kenyan females: A cross-sectional behavioral survey linked with HIV prevalence. *J Womens Health* 2015;24:801–11.
- [50] Steffenson AE, Pettifor AE, Seage GR, et al. Concurrent sexual partnerships and human immunodeficiency virus risk among South African youth. *Sex Transm Dis* 2011;38:459–66.
- [51] Cash K. What's shame got to do with it? Forced sex among married or steady partners in Uganda. *Afr J Reprod Health* 2011;15:25–41.
- [52] Parikh S. Regulating romance: Youth love letters, moral anxiety, and intervention in Uganda's time of AIDS. Nashville, TN: Vanderbilt University Press; 2016.
- [53] Green EC, Halperin DT, Nantulya V, et al. Uganda's HIV prevention success: The role of sexual behavior change and the national response. *AIDS Behav* 2006;10:335–46.