ELSEVIER

Social Science & Medicine 65 (2007) 1235–1248

SOCIAL SCIENCE & MEDICINE

www.elsevier.com/locate/socscimed

Transactional sex with casual and main partners among young South African men in the rural Eastern Cape: Prevalence, predictors, and associations with gender-based violence

Kristin L. Dunkle[a,*], Rachel Jewkes[b], Mzikazi Nduna[c], Nwabisa Jama[b], Jonathan Levin[d], Yandisa Sikweyiya[b], Mary P. Koss[e]

[a]*Emory University Atlanta, GA, USA*
[b]*Gender and Health Research Unit, Medical Research Council, South Africa*
[c]*University of the Witswatersrand, South Africa*
[d]*Biostatistics Unit, Medical Research Council, South Africa*
[e]*Mel and Enid Zuckerman College of Public Health, University of Arizona, USA*

Available online 8 June 2007

Abstract

We explored the prevalence and predictors of transactional sex with casual partners and main girlfriends among 1288 men aged 15–26 from 70 villages in the rural Eastern Cape province of South Africa. Data were collected through face-to-face interviews with young men enroling in the *Stepping Stones* HIV prevention trial. A total of 17.7% of participants reported giving material resources or money to casual sex partners and 6.6% received resources from a casual partner. Transactionally motivated relationships with main girlfriends were more balanced between giving (14.9%) and getting (14.3%). We constructed multivariable models to identify the predictors for giving and for getting material resources in casual and in main relationships. Each model resulted in remarkably similar predictors. All four types of exchange were associated with higher socio-economic status, more adverse childhood experiences, more lifetime sexual partners, and alcohol use. Men who were more resistant to peer pressure to have sex were less likely to report transactional sex with casual partners, and men who reported more equitable gender attitudes were less likely to report main partnerships underpinned by exchange. The most consistent predictors of all four types of transaction were perpetration of intimate partner violence and rape against women other than a main partner. The strong and consistent association between perpetration of gender-based violence and both giving and getting material goods from female partners suggests that transactional sex in both main and casual relationships should be viewed within a broader continuum of men's exercise of gendered power and control. HIV prevention interventions need to explicitly address transactional sex in the context of ideas about masculinity, which place a high emphasis on heterosexual success with, and control of, women.

Keywords: South Africa; Transactional sex; HIV; Gender-based violence; Men

*Corresponding author. Tel.: +1 404 663 6365.
E-mail addresses: kdunkle@sph.emory.edu (K.L. Dunkle), rjewkes@mrc.ac.za (R. Jewkes), ndunam@umthombo.wits.ac.za (M. Nduna), nwabisa.jama@mrc.ac.za (N. Jama), Jonathan.Levin@mrcuganda.org (J. Levin), yandisa.sikweyiya@mrc.ac.za (Y. Sikweyiya), mpk@u.arizona.edu (M.P. Koss).

Introduction

Financial and material exchange as a motivating force underlying sexual relationships is a well-recognized dynamic in the HIV pandemic, particularly in

0277-9536/$ - see front matter © 2007 Elsevier Ltd. All rights reserved.
doi:10.1016/j.socscimed.2007.04.029

sub-Saharan Africa (Luke, 2003). Often referred to as transactional sex, it is a motive for women to have sex in situations where they might otherwise refrain (Hunter, 2002; Jewkes, Vundule, Maforah, & Jordaan, 2001; Kaufman & Stavrou, 2004; MacPhail & Campbell, 2001; Meekers & Calves, 1997; Nyanzi, Pool, & Kinsman, 2001; Wood & Jewkes, 2001), and has been noted as a potential source of women's vulnerability to gender-based violence and sexual exploitation (Dunkle et al., 2004a; Luke, 2003; Nyanzi et al., 2001; Wojcicki & Malala, 2001). Research in a number of sub-Saharan African contexts has conclusively demonstrated that exchange of sex for material resources is common practice, and that the vast majority of women who engage in such transactions do not identify as sex workers (Hunter, 2002; Leclerc-Madlala, 2003; Luke, 2003; MacPhail & Campbell, 2001; Matasha et al., 1998; Nyanzi et al., 2001; Nzyuko et al., 1997; Silberschmidt & Rasch, 2001; Wojcicki & Malala, 2001; Wood & Jewkes, 2001). However, research on the origins and implications of this behaviour remains limited. In South Africa recent research has shown self-reported participation in transactional sex to be associated with HIV serostatus, underscoring the importance to public health of understanding such exchanges (Dunkle et al., 2004a; Pettifor et al., 2005).

Some observers have historically suggested that transactional dynamics are essentially ubiquitous in sexual relationships within sub-Saharan Africa, arising and deriving from the practice of *lobola* (bride price) and the concomitant—and compared to Western attitudes, relatively unstigmatized—tendency to view women's sexuality as instrumental and open for commoditization (Caldwell, Caldwell, & Quiggin, 1989; Helle-Valle, 1999). More recent literature on transactional sex, however, suggests that while economic exchange as a key dynamic in sexual relationships is indeed common, it is far from universal. Furthermore, transactional sexual relationships fundamentally differ from *lobola* as they do not involve formal negotiation and exchange between families.

Studies from across Africa report prevalence estimates for the exchange of sex by young women for money or gifts ranging from 5% to 78% (Luke, 2005a; Matasha et al., 1998; Meekers & Calves, 1997; Nyanzi et al., 2001; Nzyuko et al., 1997). In South Africa, a study by Jewkes et al. in Cape Town found that 21.1% of pregnant and 18.8% of non-pregnant teenagers reported having sex for money or presents (Jewkes, Vundule et al., 2001), while a more recent study of women attending antenatal clinics in Soweto found that 21.1% of participants reported having ever had sex with a non-primary male partner in exchange for material goods or money (Dunkle et al., 2004a).

Transactional sex among women is often motivated by basic survival and subsistence needs (Hunter, 2002; Leclerc-Madlala, 2003; Luke, 2003; Wojcicki, 2002) but young women whose access to resources is circumscribed may also use transactional sex to help advance their education, gain employment or business opportunities, or simply achieve higher status in youth cultures which prioritize conspicuous consumption (Hunter, 2002; Kaufman & Stavrou, 2004; Leclerc-Madlala, 2001; Luke, 2003; Nyanzi et al., 2001; Silberschmidt & Rasch, 2001). Of particular concern is the way in which financial or material needs can introduce an explicit power imbalance into sexual relations. In qualitative research women often assert that accepting financial or material assistance from a man means accepting sex on his terms, which very often means without condoms (Hunter, 2002; MacPhail & Campbell, 2001; Meekers & Calves, 1997; Wood & Jewkes, 2001). Women may also face rape and physical violence from men who anticipated that financial outlay would be reciprocated by sex (Wood & Jewkes, 2001), and women often tolerate physical or sexual violence in order to sustain relationships which provide critical income (Wood & Jewkes, 2001).

Most research on transactional sex to date has focused on women, particularly younger women in relationships with older men (i.e. "sugar daddies"). (Luke, 2003, 2005a). As a result, we have little information on transactional sex from men's perspective, and almost no data on younger men. A synthesis of data from Demographic and Health Surveys in nine sub-Saharan African countries shows that between 7.4% and 42.8% of unmarried (generally younger) men and 3.4–18.3% of married (generally older) men reported giving or receiving money, gifts, or favours for sexual relations in the last 12 months (Luke, 2005a). A study of men aged 21–45 in Kisumu, Kenya found that three-quarters of non-marital sexual partnerships involved transfer of money or goods to the female partner in the past month (Luke, 2005b) and another study in Ondo Town, Nigeria found that men gave material transfers in 70% of non-martial partnerships in the last year (Orubuloye, Caldwell, & Caldwell,

1992). The Kenyan study also found that the likelihood of condom use at last sex with a given non-marital partner was lower when the value of a man's financial and material contributions over the last month was higher (Luke, 2006).

Standard survey questions have generally defined transactional sex only in terms of giving money or gifts to a sexual partner, and few have distinguished exchanges within primary relationships (which may be non-marital) from those with casual or concurrent partners (Luke, 2005a). Most quantitative work on transactional sex also fails to distinguish between financial or material transfers which function as gifts, or even entitlements (e.g. child support), and those that function as transactions. We define gifts as material or monetary transfers whose primary intention is to express affection or otherwise solidify and enhance affective dimensions of a relationship. Transactions, in contrast, are primarily motivated from the giver's side by a desire to secure or maintain sexual access (or other services) and from the receiver's side by a desire to generate resources. Of course, gift and transaction motives can coexist and overlap, and there may not always be a shared understanding between the parties involved as to the meaning of a particular transfer (Carrier, 1991; Luke, 2005a). Nonetheless, the distinction between gifts and transactions is critically important because while gifts often form an integral part of courtship or expressions of care and affection within relationships, they may not be a critical motivating factor underpinning the existence of the relationship or motivating a particular sexual encounter (Hunter, 2002; Kaufman & Stavrou, 2004; Luke, 2005a). It is important to ascertain the extent to which a given transfer—or the existence of a given relationship involving regular transfers—is understood by either party to be fundamentally transactional rather than gift-based as this has potentially important implications for understanding the power dynamics surrounding sexual decision making.

Qualitative research has addressed these issues with more nuance than quantitative work has yet achieved, and has consistently demonstrated that exchange of money and material resources takes on different meanings in different kinds of relationships. In many cultural settings, and certainly within South Africa, casual and secondary sexual relationships seem far more likely than main partnerships to be driven explicitly by transactional motives. While the balance of financial and economic power may of course impact the dynamics of sexual decision making within main partnerships, these negotiations are perforce also influenced by considerably more complex relational discourses including love, trust, commitment, and childbearing (Hunter, 2002; Kaufman & Stavrou, 2004; Leclerc-Madlala, 2003; Luke, 2005a; Meekers & Calves, 1997; Wood & Jewkes, 2001).

To address some of the gaps in previous quantitative work on these issues, we drew on baseline data from the Stepping Stones study, an HIV behavioural prevention trial in the rural Eastern Cape Province of South Africa. These data offer a rich opportunity for secondary analysis. We assessed young men's participation in transactional sexual relationships with both causal partners and main girlfriends using a culturally tailored measure based on local ethnographic data (Dunkle et al., 2004a; Jewkes, Nduna et al., 2006). We here examine the prevalence and predictors of transactional sex with casual partners and, in separate analysis, transactionally motivated relationships with main girlfriends. We also compare men giving resources to female partners to men getting resources from female partners, an activity which has so far been described in only a very limited way through qualitative research (Kaufman & Stavrou, 2004; Matasha et al., 1998; Meekers & Calves, 1997). We first explore predictors of each of these four behaviours, and then consider potentially correlated behaviours, including substance use, number of sexual partners, and perpetration of gender-based violence.

We use our data to test two hypotheses regarding gender and power dynamics associated with transactional sex. First, if explicit transaction is indeed a normative and relatively ubiquitous dynamic in primary partnerships in South Africa, we would expect little to no variation in gender-based violence perpetration in relationships with main partners which are identified as transactionally motivated compared to those which are not. Secondly, if material transfers are in fact a male strategy for controlling women and their sexuality, then we would expect men who give resources to main or casual female partners to exhibit other controlling and violent behaviours. In contrast, if giving resources to a sexual partner is inherently a source of power regardless of gender, then men who obtain resources from their female partners might be expected to report lower levels of controlling or violent behaviour.

Methods

Between 2002 and 2003 we recruited 1396 men aged 15–26 into a cluster randomized controlled trial to evaluate the Stepping Stones HIV prevention programme (Jewkes, Nduna, & Jama, 2002). A detailed description of the trial's methods are presented elsewhere (Jewkes, Nduna et al., 2006). The participants were volunteers from 70 villages near Mthatha in the Eastern Cape province of South Africa. While this area is predominantly rural, it lacks a sound agricultural base and has no local industry. There are few job opportunities, and unemployment and poverty are widespread.

Most participants were recruited through local secondary schools. Between 15 and 25 men per village completed the baseline assessment, in which face-to-face interviews were administered in Xhosa by young male fieldworkers using a structured questionnaire (Jewkes, Nduna et al., 2006). We excluded from this analysis 83 men who had never had sex (5.9%) and 25 who provided no information about sexual history (1.8%), leaving a final sample of 1288 sexually experienced men.

Defining and assessing transactional sex with casual partners and transactionally motivated relationships with main partners

Questionnaire items previously used by Dunkle et al. (2004a) among women in Soweto were adapted for use with men, translated into isiXhosa and pre-tested before use. Separate items assessed lifetime history of transactional sex with casual partners and transactional relationships with main girlfriends. Two broad types of casual partners were included: *khwapheni* (secret partners concurrent with a main partner) and "once-offs" i.e. any partner with whom the participant had sex only once. We have found this style of questioning to maximize disclosure of sexual partnerships (Jewkes, Nduna, Jama, Dunkle, & Levin, 2002). Transactional sex where a man gave to a casual partner was defined as occurring when the man thought the woman's participation was motivated by his providing her (or her expectation that he would provide her) with food, cosmetics, clothes, transportation, items for children or family, school fees, somewhere to sleep, alcohol or a "fun night out", or cash. Complementary qualitative research and discussion with field staff revealed that when a man receives money or goods from a casual female partner in an on-going relationship she would be referred to as a *griza*. Transactional sex involving getting from casual partners was therefore defined a young man's sexual relationship with a *griza* or "once-off" female partner which motivated by her giving him food, clothing, transport, school fees, somewhere to stay, alcohol or a "fun night out", or cash.

We defined transactional relationships with main partners as those where exchange was identified by the participant as a key motivating factor underlying the existence of the relationship. Thus men were asked whether they believed any of their main girlfriends "became involved with you because they expected you to provide them with, or because you provided them with" any of the items noted above. Men were also asked whether they had become involved with a main girlfriend "because she provided you with or you expected that she would provide you with" a similar list of items.

Violence perpetration

Perpetration of emotional, physical, or sexual violence against a man's current main girlfriend or any other main girlfriend (lifetime perpetration) was assessed using an adaptation for men of the WHO violence against women instrument (World Health Organization, 2000). Five questions on emotional abuse covered insulting, humiliating, belittling, intimidating, and threatening to hurt his girlfriend, as well as stopping her from seeing her friends. Questions on physical and sexual assault contained specific, objective descriptions of violent behaviour by men: six items covered physical violence including: pushed, shoved, slapped, hit with fist, kicked, beaten up, strangled, burnt, hurt/threatened with a weapon, or threw something that could hurt her. Four sexual abuse items asked about physically forcing a girlfriend to have sex when she did not want it, frightening her into having sex, and forcing her to have oral sex or anal sex.

Sexual violence outside the context of IPV was assessed by asking whether the participant had made a woman who was not his girlfriend "have sex with you when she did not want to", whether he had tried to do this but not actually had sex, and whether he had made such a woman "have sex with you when she was too drunk to say whether or not she wanted it." Co-perpetration of group sexual violence was assessed by asking "Was there ever an occasion when you and other men had sex with a woman against her will or when she was too drunk

to stop you?'' and ''Have you ever done *streamlining* [gang rape]?''

Other interview data

Participants were asked about a range of demographic factors including age, education, and earning money. Household socio-economic status was measured on a scale capturing household goods ownership, hunger, and perceived difficulty accessing a modest sum of money for a medical emergency (Jewkes, Nduna et al., 2006).

Childhood trauma was assessed using a 17-item modified version of the short form of the Childhood Trauma Questionnaire (Cronbach's alpha for men = 0.72) (Bernstein et al., 2003). Each participant was also asked about age at first sex, and whether he had ever been coerced into sex by another man.

We assessed exposure to popular media using three questions covering reading magazines in the past week, listening to the radio at least once per week, and watching TV at least once per week; answers were summed to create scores. We used a four-item scale developed for this study to measure resistance to peer pressure to have sex (Cronbach's alpha = 0.72).

Attitudes towards gender relations and relationship control were measured using a 13-item scale derived for this study using a combination of items from the Sexual Relationship Power Scale and previous South African studies covering beliefs in gender norms (Cronbach's alpha = 0.69) (Jewkes, Nduna et al., 2006; Dunkle et al., 2004b; Pulerwitz, Gortmaker, & DeJong, 2000). Sample items include ''When I want (NAME) to sleep over I expect her to agree'' and ''A woman should listen to her husband.'' This scale was scored as a five level categorical variable, with four score levels representing quartiles of the distribution and a fifth category representing men who had no score because they had no current main girlfriend.

Peer group associations were assessed by asking men if they were currently a member of any clubs or sports teams and if they had ever been a member of a gang. Lifetime number of sexual partners was assessed by asking participants separately about main partners, *khwapheni,* and ''once-offs''. Alcohol use was measured with the AUDIT; a score of 8 of higher was considered indicative of a problem (Saunders, Aaland, Babor, de la Fuente, & Grant, 1993). Illicit drug use was assessed by asking participants whether they had ever used marijuana, mandrax, injectable drugs, substances which were sniffed or other substances.

Ethics approval

Written informed consent was given by participants before formal registration in the study and the first interview. Ethical approval for the study was given by the University of Pretoria.

Statistical analysis

The dataset was a stratified, two stage survey with participants clustered within villages. Descriptive data analysis was carried out using the svy commands in STATA 9 to compute standard errors. Descriptive statistics were first calculated for all variables, and the extent to which the different types of transactional sex and economic exchange were co-reported was also calculated. Two-way associations were determined between hypothesized predictor variables and each of the measures of transactional sex. Multiple logistic regression models were then constructed for each outcome using xtlogit, which adjusts for clusters as latent variables within the model. Variables were entered into each model in conceptually related groups, beginning with demographics, then childhood trauma and early sexual experiences, then scales measuring attitudes and beliefs. Models thus constructed are reported as ''Model 1: Predictors'' for each outcome. We then added variables describing other behaviours whose temporal relationship vis-à-vis the reported transactional sex could not be determined: these included peer group associations, sexual behaviour, substance use, and perpetration of gender-based violence. Models including these variables are labelled ''Model 2: Predictors and Correlated Behaviour'' for each outcome. At each iteration, all variables in the model were tested for significance using Wald tests, and those that were significant were retained. This process was repeated for each model. All models thus constructed were then checked using a backwards elimination approach.

Results

Participants ranged in age from 15 to 26; 29.0% ($N = 374$) were under 18, 54.7% ($N = 704$) were between 18 and 20, and 16.3% ($N = 210$) were 21

and older. The majority 97.3% ($N = 1252$) were students. All men reported at least one main girlfriend in their lifetime, and 89.1% had a main girlfriend at the time of the interview. No man was married or cohabiting. Participants reported from 1 to 105 lifetime female sex partners with a mean of 6.6 and a median of 5; 72.7% reported at least one casual partner. Table 1 shows the proportion of men reporting different exchange activities involving various commodities. Overall, 17.7% of the participants reported transactional sex that involved giving to a casual partner, while 6.6% reported getting resources from a casual partner. Participants were equally likely to say that they gave or got money or goods from main partners (14.9% and 14.3%). Fig. 1 shows the overlap between giving and receiving in transactions with main and casual partners; 36 men (2.8% of the total sample) reported engaging in all four types of transaction.

Tables 2 and 3 show the distribution and 95% confidence intervals of hypothesized predictors and correlated behaviours over the four behaviours assessed as outcomes. Table 2 shows notable overall consistency in the factors associated with giving material resources to casual partners or getting resources from them. Similarly, Table 3 shows that men who gave to main partners were comparable to men who got from them, but different from those who did not.

Initial multiple logistic regression models for giving and getting in transactional sex with casual partners (Table 4) were remarkably similar. When potentially concurrent and correlated behaviour was added to the models, resistance to peer pressure remained consistently protective against both giving (OR = 0.77) and getting (OR = 0.74), while earning money (OR = 1.61) and exposure to media (OR = 1.34) remained associated with giving. Lifetime numbers of sexual partners was strongly associated with both types of transaction ($OR_{give} = 1.25$; $OR_{get} = 1.26$), while problematic alcohol use was significant only for giving (OR = 1.62). Contrary to expectation, perpetration of gender based violence strongly predicted both giving and getting. Perpetration of emotional abuse against a main partner was associated only with getting (OR = 2.33); however, perpetration of both physical and sexual IPV (generally the most severe violence) was the single strongest predictor of both giving (OR = 5.63) and getting (OR = 2.77). Non-IPV sexual assault was also associated with both giving (OR = 1.61) and getting (OR = 2.24).

Preliminary models for transactional relationships with main partners (Table 5) were very similar to those for transactional sex with casual partners, and models for both giving and getting again showed notable consistency. When potentially concurrent and correlated behaviours were added, men with the most equitable scores on gender attitudes

Table 1
Self-reported prevalence of transactional sex with main and casual partners in exchange for various commodities among 1288 sexually active men aged 15–26 participating in the Stepping Stones HIV Prevention Study in the rural Eastern Cape, South Africa

Any sex with partner type	Casual partners				Main partners			
	913		71.1%		1288		100%	
Exchange with partner type	Give		Get		Give		Get	
	N	%	*N*	%	*N*	%	*N*	%
	228	17.7	85	6.6	192	14.9	184	14.3
Exchange (ever) for								
Food	38	3.0	3	0.2	37	2.9	51	4.0
Clothing	31	2.4	2	0.2	33	2.6	25	1.9
Transport	37	2.9	6	0.5	31	2.4	32	2.5
School fees	17	1.3	0	0.0	19	1.5	18	1.4
Somewhere to stay	69	5.4	24	1.9	22	1.7	15	1.2
Cash	163	12.7	68	5.3	136	10.6	160	12.4
Cosmetics	28	2.8	–		42	3.3	–	–
Items for children or family	8	0.6	–		19	1.5	–	–
Alcohol or a good time	38	3.0	6	0.5	–	–	–	–

Note: All percentages are out of the total sample of 1288.

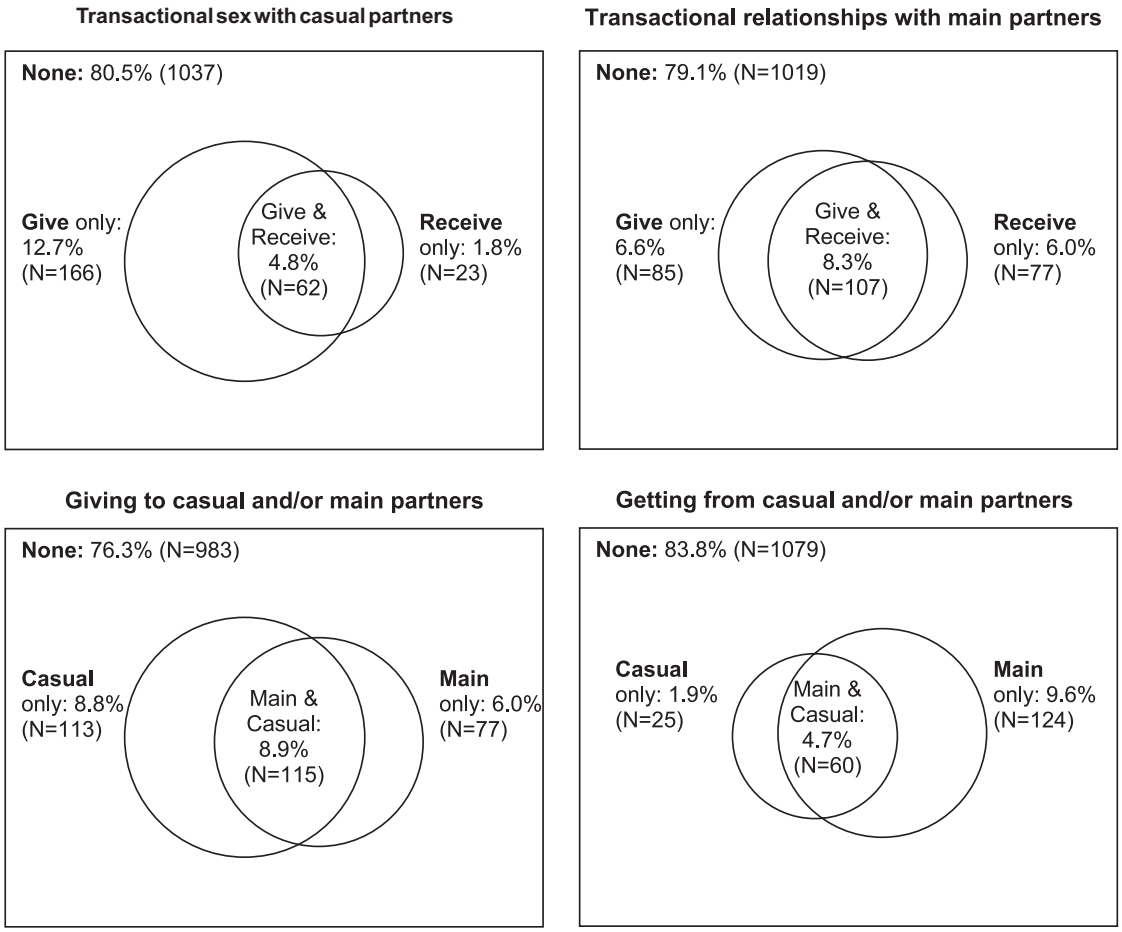

Fig. 1. Overlap between different types of transactional sexual relationships.

and relationship control remained less likely to report material exchanges with a main partner, either giving (OR = 0.55) or getting (OR = 0.43), than men with the lowest scores. Men who came from households with higher SES remained more likely to report giving (OR = 1.21), while men who had earned money were more likely to get (OR = 1.67). Those with 10 or more years of education were less likely to give (OR = 0.57). However, as with casual partners, men who had more lifetime sexual partners and those who reported problems with alcohol use were more likely to report both giving ($OR_{partners} = 1.25$; $OR_{alcohol} = 1.92$) and getting ($OR_{partners} = 1.19$; $OR_{alcohol} = 1.82$). And again, men who reported perpetrating physical, sexual, or both types of IPV against a main partner were significantly more likely to report both giving and getting, with increasing odds ratios from physical violence only ($OR_{give} = 1.59$; $OR_{get} = 1.50$) to sexual violence only ($OR_{give} = 2.50$; $OR_{get} = 2.25$) to both types ($OR_{give} = 4.97$ and $OR_{get} = 4.08$). Those who reported perpetrating non-IPV sexual assault were more likely to report getting from main partners (OR = 1.81), but not more likely to report giving to them.

Discussion

We began with a hypothesis stating that if transaction as a motivating factor underlying relationships with main partners is a normative and relatively ubiquitous dynamic in primary partnerships in South Africa, we would not expect to see variation in gender-based violence perpetration associated with transactional relationships with main partners. While the men interviewed were not a random sample, we found the prevalence of men

Table 2
Distribution of demographic, attitude, and behavioral measures among 1288 sexually active men aged 15–26 participating in the Stepping Stones HIV Prevention Study in the rural Eastern Cape, South Africa who report transactional sex with casual sex partners

Variable	Giving to casual partners Mean or % (95% CI)		Getting from casual partners Mean or % (95% CI)	
	No	Yes	No	Yes
Demographics				
Age (mean)	19.1 (19.0, 19.3)	19.4 (19.1, 19.7)	19.2 (19.0, 19.4)	19.1 (18.7, 19.5)
10 or more years education (%)	43.6 (38.0, 49.3)	48.3 (39.3, 57.2)	44.5 (39.1, 50.0)	43.5 (32.4, 54.7)
Respondent ever earned money (%)	51.6 (47.5, 55.7)	69.7 (63.6, 75.9)	53.7 (49.7, 57.7)	70.6 (60.4, 80.8)
Household SES scale (mean)	−0.03 (−0.17, 0.12)	0.16 (−0.05, 0.37)	−0.01 (−0.16, 0.13)	0.28 (0.20, 0.55)
Early sex, child trauma and sexual victimization				
First sex under age 15 (%)	54.4 (50.7, 58.0)	66.7 (60.6, 72.7)	55.9 (52.6, 59.2)	65.9 (56.4, 75.3)
Childhood trauma scale (mean)	−0.05 (−0.12, 0.01)	0.21 (0.06, 35)	−0.03 (−0.09, 0.04)	0.29 (−0.01, 0.60)
Ever coerced into sex by a man (%)	2.7 (1.7, 3.8)	5.7 (2.0, 9.4)	3.1 (2.1, 4.0)	5.9 (7.8, 11.0)
Attitudes and beliefs				
Exposure to media (mean)	2.04 (1.98, 2.10)	2.17 (2.08, 2.27)	2.05 (1.99, 2.11)	2.22 (2.09, 2.35)
Peer pressure resistance (mean)	0.04 (−0.03, 0.12)	−0.27 (−0.39, −0.15)	0.02 (−0.06, 0.09)	−0.34 (−0.32, −0.02)
Gender relationships and control Q1 (%)	22.5 (18.6, 26.3)	20.6 (14.9, 26.4)	22.3 (18.6, 26.0)	20.0 (11.1, 28.9)
Gender relationships and control Q2 (%)	23.7 (20.4, 27.0)	16.7 (11.1, 22.2)	22.5 (19.6, 25.5)	21.2 (11.2, 31.1)
Gender relationships and control Q3 (%)	20.2 (17.0, 23.4)	31.1 (24.5, 37.8)	21.7 (18.5, 24.9)	28.2 (19.8, 36.7)
Gender relationships and control Q4(%)	22.0 (18.2, 25.8)	24.1 (17.8, 30.4)	22.2 (18.5, 25.9)	24.7 (14.1, 35.4)
No score (no current main girlfriend) (%)	11.7 (9.6, 13.7)	7.5 (3.8, 11.1)	11.3 (9.4, 13.1)	5.9 (4.8, 11.3)
Sexual behavior				
Partners in lifetime (mean)	5.8 (5.4, 6.3)	10.4 (9.3, 11.5)	6.2 (5.8, 6.7)	12.6 (10.2, 15.1)
Used condom correctly at last sex (%)	40.1 (36.5, 43.7)	46.8 (39.6, 54.2)	40.7 (37.1, 44.3)	49.4 (37.0, 61.8)
Peer group associations				
Member of club or sports team (%)	72.6 (68.6, 76.7)	82.5 (76.5, 88.4)	73.7 (69.6, 77.7)	84.7 (76.1, 93.3)
Member of gang (%)	6.0 (4.3, 7.8)	9.6 (5.8, 13.4)	6.4 (4.8, 8.0)	10.6 (4.1, 17.0)
Substance use				
Alcohol problem (%)	22.5 (19.4, 25.5)	43.4 (35.7, 51.2)	24.9 (21.6, 28.3)	43.5 (33.9, 53.2)
Illegal drug use (%)	38.0 (34.0, 42.0)	39.5 (35.9, 58.2)	38.0 (33.9, 42.1)	42.2 (34.0, 50.3)
Perpetration of gender-based violence				
Ever perpetration of emotional abuse (%)	28.8 (26.0, 31.6)	57.6 (49.9, 65.3)	31.5 (28.4, 34.6)	67.4 (56.8, 78.1)
IPV: none (%)	73.6 (70.8, 76.3)	42.9 (34.9, 50.9)	70.0 (67.0, 73.0)	41.0 (31.1, 50.8)
Physical IPV only (%)	20.1 (17.7, 22.6)	35.8 (28.2, 43.5)	22.4 (19.6, 25.2)	30.1 (19.8, 40.4)
Sexual IPV only (%)	3.3 (2.2, 4.4)	4.9 (2.0, 7.7)	3.4 (2.3, 4.5)	7.2 (1.9, 12.5)
Both physical and sexual IPV (%)	3.0 (2.0, 3.9)	16.4 (11.5, 21.2)	4.2 (3.3, 5.1)	21.7 (12.0, 31.4)
Perpetration of non-IPV sexual assault (%)	16.9 (14.3, 19.6)	39.5 (32.5, 46.5)	19.9 (16.2, 21.5)	49.4 (39.3, 59.5)

reporting explicitly transactional relationships with main partners to be under 15%, and also that the direction of exchange was equally likely to be from women to men as from men to women. These findings suggest that economic exchange from young men to women is not a normative motive for main partnerships in the study area. We also found increased perpetration of gender-based violence to be strongly associated with reporting main partnerships motivated by giving or getting material resources, and that more equitable attitudes towards gender relations and less controlling behaviour in their main partnerships made such self-reports less likely. Taken together, these findings fail to support the idea that transaction is a particularly common dynamic underlying main partnerships of men in the study, and underscore the potential role of material transfers in broader patterns of gender-based power and control.

We also hypothesized that if transactional sex is an inherently gendered strategy for control of women by men, then men who give resources to

Table 3
Distribution of demographic, attitude, and behavioral measures among 1288 sexually active men aged 15–26 participating in the Stepping Stones HIV Prevention Study in the rural Eastern Cape, South Africa who report transactional relationships with main partners

Variable	Giving to main partners Mean or % (95% CI)		Getting from main partners Mean or % (95% CI)	
	No	Yes	No	Yes
Demographics				
Age (mean)	19.2 (19.0, 19.4)	19.3 (18.9, 19.6)	19.2 (19.0, 19.4)	19.2 (18.9, 19.6)
10 or more years education (%)	45.9 (40.7, 51.1)	35.9 (26.3, 45.6)	45.3 (40.1, 50.6)	39.1 (30.0, 48.3)
Respondent ever earned money (%)	53.1 (49.2, 57.0)	64.6 (56.8, 72.4)	52.5 (48.4, 56.5)	69.0 (62.3, 75.7)
Household SES scale (mean)	−0.45 (−0.19, 0.10)	0.29 (0.03, 0.55)	0 (−0.15, 0.14)	0.06 (−0.19, 0.31)
Early sex, child trauma and sexual victimization				
First sex under age 15 (%)	55.8 (52.2, 59.3)	60.9 (55.3, 66.6)	55.1 (51.6, 58.6)	65.2 (59.5, 70.9)
Childhood trauma scale (mean)	−0.04 (−0.10, 0.02)	0.18 (0.04, 0.32)	−0.05 (−0.11, 0.01)	0.24 (0.08, 0.40)
Ever coerced into sex by a man (%)	2.7 (1.6, 3.9)	6.3 (2.5, 10.0)	3.1 (2.0, 4.1)	4.3 (1.2, 7.5)
Attitudes and beliefs				
Exposure to media (mean)	2.06 (2.00, 2.12)	2.06 (1.97, 2.16)	2.07 (2.01, 2.13)	2.03 (1.93, 2.13)
Peer pressure resistance (mean)	0.02 (−0.06, 0.09)	−0.17 (−0.32, −0.02)	0.03 (−0.05, 0.10)	−0.24 (−0.40, −0.07)
Gender relationships and control *Q*1 (%)	21.0 (17.2, 24.8)	28.6 (21.8, 35.5)	21.5 (17.8, 25.1)	26.1 (19.1, 33.1)
Gender relationships and control *Q*2 (%)	22.9 (19.7, 26.1)	19.8 (14.6, 25.0)	22.5 (19.4, 25.6)	22.3 (15.7, 28.8)
Gender relationships and control *Q*3 (%)	21.9 (18.7, 25.1)	23.4 (16.4, 30.5)	21.2 (18.0, 24.4)	27.7 (21.1, 34.3)
Gender relationships and control *Q*4(%)	22.6 (18.9, 26.4)	20.8 (14.1, 27.6)	23.3 (19.4, 27.2)	16.8 (11.5, 22.1)
No score (no current main girlfriend) (%)	11.5 (9.5, 13.6)	7.3 (3.3, 11.3)	11.6 (9.6, 13.5)	7.1 (2.8, 11.4)
Sexual behavior				
Partners in lifetime (mean)	6.1 (5.6, 6.5)	9.9 (7.8, 12.1)	6.1 (5.6, 6.6)	9.9 (8.5, 11.3)
Used condom correctly at last sex (%)	41.7 (37.9, 45.4)	39.1 (31.3, 46.8)	40.4 (36.9, 43.9)	46.7 (38.1, 55.4)
Peer group associations				
Member of club or sports team (%)	73.6 (69.6, 77.7)	78.6 (71.5, 85.8)	73.8 (69.6, 78.0)	77.7 (70.9, 84.6)
Member of gang (%)	6.6 (4.8, 8.4)	7.3 (3.7, 10.9)	6.3 (4.6, 7.9)	9.2 (5.0, 13.5)
Substance use				
Alcohol problem (%)	23.6 (20.2, 27.1)	40.6 (34.4, 46.9)	23.4 (20.2, 26.7)	42.4 (35.4, 49.4)
Illegal drug use (%)	38.0 (33.9, 42.1)	42.2 (34.0, 50.3)	36.9 (32.8, 40.9)	48.9 (40.7, 57.2)
Perpetration of gender-based violence				
Ever perpetration of emotional abuse (%)	30.6 (27.5, 33.7)	52.7 (45.0, 60.3)	30.6 (37.5, 33.8)	53.0 (45.5, 60.5)
IPV: none (%)	71.5 (68.5, 74.5)	49.0 (40.7, 57.2)	71.7 (68.7, 74.6)	47.3 (40.4, 54.2)
Physical IPV only (%)	21.9 (19.2, 24.5)	28.9 (21.3, 36.6)	21.7 (18.9, 24.6)	29.9 (22.1, 37.7)
Sexual IPV only (%)	3.1 (2.0, 4,2)	6.3 (2.8, 9.8)	3.2 (2.1, 4.3)	6.0 (2.8, 9.2)
Both physical and sexual IPV (%)	3.5 (2.5, 4.5)	15.8 (10.0, 21.6)	3.4 (2.4, 4.4)	16.8 (11.1, 22.6)
Perpetration of non-IPV sexual assault (%)	18.3 (15.6, 20.9)	35.9 (28.9, 43.0)	17.7 (14.9, 20.4)	40.2 (33.1, 47.3)

female partners (either main or casual) would be more likely to exhibit other controlling and violent behaviours, while if the act of transaction inherently involves control of the partner who receives resources by the partner who gives them, then men who get resources from their partners would not necessarily be expected to be more controlling or violent. We found that both men who gave and those who got resources from female partners were about equally likely to report a range of other controlling and violent behaviours, including perpetration of IPV. Indeed, perpetration of severe IPV (as assessed by the occurrence of both physical and sexual assault) was the single strongest correlate of all four forms of transactional sex assessed. In other words, it seems that gendered power trumps the possession of socioeconomic resources.

An important limitation of our data is that it does not allow us to discern whether IPV perpetration reported by men who got resources from main girlfriends was perpetrated against the same women who provided the resources. If so, it may be that

Table 4
Multivariable logistic regression model for self-reported transactional sex with casual partners among 1288 sexually active men aged 15–26 participating in the Stepping Stones HIV Prevention Study in the rural Eastern Cape, South Africa

Variable	Giving to casual partners						Getting from casual partners					
	Model 1: Predictors			Model 2: Predictors and correlated behavior			Model 1: Predictors			Model 2: Predictors and correlated behavior		
	OR	95% CI		OR	95% CI		OR	95% CI		OR	95% CI	
Demographics												
Age[a]	1.17	1.06	1.28	1.11	1.01	1.22	0.95	0.84	1.09	0.91	0.79	1.05
10 or more years education				–						–		
Ever earned money (respondent)	1.92	1.37	2.69	1.61	1.13	2.30	1.70	1.03	2.79	–		
Socioeconomic status (household)[a]	1.13	1.01	1.27	–			1.24	1.04	1.46	–		
Early sex and child trauma												
First sex under age 15	1.70	1.21	2.37	–			–			–		
Childhood trauma scale[a]	1.24	1.07	1.43	–			1.26	1.05	1.52	–		
Ever coerced into sex by a man	2.21	1.05	4.67	–			–			–		
Attitudes and beliefs												
Exposure to media[a]	1.31	1.05	4.67	1.34	1.03	1.74	1.51	1.03	2.19	–		
Peer pressure resistance[a]	0.73	0.62	0.86	0.77	0.65	0.91	0.68	0.54	0.86	0.74	0.58	0.95
Gender relationships and control[a]	–			–			–			–		
Sexual partners and alcohol												
Partners in lifetime[b]				1.25	1.13	1.38				1.26	1.13	1.41
Alcohol problem				1.61	1.13	2.29				–		
Perpetration of GBV												
Ever perpetration of emotional abuse				–						2.33	1.32	4.12
IPV: None				1.00	Ref					1.00	ref	
Physical IPV only				2.26	1.55	3.27				1.29	0.70	2.36
Sexual IPV only				1.74	0.79	3.84				1.92	0.67	5.51
Both physical and sexual IPV				5.63	3.06	10.35				2.77	1.27	6.01
Non-IPV sexual assault				1.61	1.10	2.35				2.24	1.33	3.77

[a]Per one unit increase in age or score.
[b]Per increase of 5 lifetime partners.

men's getting resources from female partners in this setting would in fact be better framed as a form of financial abuse or exploitation, where men who anticipate that sex or the existence of the relationship will be rewarded with financial/material resources become violent if thwarted. Such an explanation would be consistent with previous findings on financial abuse in South Africa (Dunkle, Jewkes, Brown, Yoshihama et al., 2004; Jewkes, Penn-Kekana, Levin, Ratsaka, & Schrieber, 2001). If men's violence is instead directed towards other partners, it may be that men who feel disempowered in one relational context are more likely to assert control through violence in other situations. It may also be the case that both explanations are true under certain circumstances. Unfortunately, our data do not allow us to explore this question. This will be an important issue to address in future research.

We did find all four types of transactional sex measured to be correlated with self-reported perpetration of both IPV and sexual assault against women who are not main girlfriends. We have previously shown that rape perpetration is correlated with having more sexual partners, perpetrating IPV, and engaging in transactional sex (Jewkes, Dunkle et al., 2006), and that IPV perpetration was similarly correlated with having more sexual partners, rape perpetration, and transactional sex (Dunkle et al., 2006). Taken in combination with the detailed investigation of transactional sex in this article, these findings provide evidence for an argument that transactional sex should be viewed as part of a cluster of closely related violent and

Table 5
Multivariable logistic regression models for self-reported economic exchange with main partners among 1288 sexually active men aged 15–26 participating in the Stepping Stones HIV Prevention Study in the rural Eastern Cape, South Africa

Variable	Giving to main partners						Getting from main partners					
	Model 1: Predictors			Model 2: Predictors and correlated behavior			Model 1: Predictors			Model 2: Predictors and correlated behavior		
	OR	95% CI		OR	95% CI		OR	95% CI		OR	95% CI	
Demographics												
Age[a]	1.08	0.97	1.19	1.07	0.96	1.19	1.00	0.91	1.10	0.97	0.88	1.08
10 or more years education	0.65	0.45	0.95	0.57	0.38	0.85	–			–		
Ever earned money (respondent)	1.48	1.04	2.11	–			2.01	1.41	2.85	1.67	1.16	2.40
Socioeconomic status (household)[a]	1.29	1.13	1.46	1.21	1.06	1.38	–			–		
Early sex and child trauma												
First sex under age 15	–			–			1.50	1.06	2.12	–		
Childhood trauma scale[a]	1.19	1.02	1.38	–			1.23	1.06	1.42	–		
Ever coerced into sex by a man	2.86	1.34	6.13	2.60	1.16	5.85	–			–		
Attitudes and beliefs												
Exposure to media[a]	–			–			–					
Peer pressure resistance[a]	0.85	0.71	1.00	–			0.82	0.70	0.97	–		
Gender r'ships and control Q1[b]	1.00	Ref		1.00	Ref		1.00	Ref		1.00	Ref	
Gender r'ships and control Q2	0.66	0.40	1.08	0.68	0.41	1.15	0.89	0.55	1.44	0.89	0.54	1.46
Gender r'ships and control Q3	0.68	0.42	1.11	0.63	0.38	1.05	0.99	0.62	1.56	0.92	0.57	1.49
Gender r'ships and control Q4	0.62	0.37	1.03	0.55	0.32	0.94	0.57	0.34	0.96	0.43	0.25	0.74
No score (no current main girlfriend)	0.47	0.24	0.93	0.55	0.27	1.10	0.56	0.28	1.10	0.58	0.29	1.18
Sexual partners and alcohol												
Partners in lifetime[c]				1.25	1.13	1.39				1.19	1.08	1.31
Alcohol problem				1.92	1.32	2.79				1.82	1.26	2.63
Perpetration of GBV												
Ever perpetration of emotional abuse				–						–		
IPV: None				1.00	ref					1.00	ref	
Physical IPV only				1.59	1.05	2.40				1.50	1.01	2.25
Sexual IPV only				2.50	1.15	5.41				2.25	1.04	4.88
Both physical and sexual IPV				4.97	2.73	9.04				4.08	2.25	7.41
Non-IPV sexual assault				–						1.81	1.23	2.66

[a]Per one unit increase in age or score.
[b]Q1–Q4 represent quartiles of the distribution, with increasing scores representing more equitable attitudes and relationships.
[c]Per increase of 5 lifetime partners.

controlling practices, and may often be motivated by ideas of sexual conquest (measured in terms of numbers of female sexual partners) as much as sexual desire. Researchers studying masculinities among young men in the general study area have described a model of masculine success that is based centrally on proving heterosexual success with women (gaining the 'best' and most female partners) and asserting control over women, often violently (Campbell, 2003; Wood & Jewkes, 2001). Our findings related to transactional sex, casual partnerships and overall partner numbers suggest that material transfers may comprise a key strategy to secure female partners that can well be understood with the broader context of this idea of masculinity. This also has implications for interventions, as we would expect this cluster of behaviours and ideas to carry with them high HIV risk. It seems likely that community-level interventions that specifically address overall ideas of masculinity and seek to shape alternative models would be more successful in changing men's behaviour and thereby reducing incidence of both gender-based violence and HIV.

The models of background factors associated with transactional sex among these rural young men indicate that these practices are more common among those of relatively higher socio-economic status and those who experienced higher levels of victimization in childhood. Intriguingly, these same risk factors are also associated with a greater likelihood of rape perpetration (Jewkes, Dunkle et al., 2006). In that context, it has been suggested the experience of trauma in childhood reduces men's ability to form emotionally intimate relationships with women and as a result they develop a preference for impersonal sex (Knight & Sims-Knight, 2003; Malamuth, 2003). Explicitly transactional sex and rape are both types of impersonal sex. The process by which such combinations of circumstances and experiences in childhood impact the development of gender identity in young men deserves more research attention and may provide an important point for developing interventions aimed at preventing both HIV risk and gender-based violence women.

A positive association between perceived peer and cultural norms and economic exchange in sexual relationships has been documented in other studies in sub-Saharan Africa (Kaufman & Stavrou, 2004; Leclerc-Madlala, 2003; Luke, 2003; MacPhail & Campbell, 2001). In our study, men with greater exposure to mass media were more likely to report transactional sex with casual partners, while those who reported higher resistance to peer pressure to have sex were less likely to report all types of exchange. Furthermore, those who reported more equitable gender attitudes and less controlling behaviour with main partners were less likely to report main partnerships underpinned by exchange. All of these findings point to the critical importance of cultural norms, as well as individual resistance or challenge to them, in shaping men's transactional sexual behaviour (see also MacPhail & Campbell, 2001).

Limitations

The data were cross-sectional, which limited our ability to gauge the temporal relationship between events. The sample consisted of young male volunteers who chose to enrol in an HIV intervention programme; they are not representative of older men and may also differ from other young men in unknown ways. Sensitive and socially devalued behaviours may have been under-reported in our face-to-face interviews despite our efforts to maximize disclosure by using culturally appropriate wording of questions and age and sex-matched interviewers (Jewkes, Nduna et al., 2006). Under-reporting of sensitive behaviours would influence the results, but it is impossible to know if such under-reporting was differential and therefore impossible to guess the impact on the study's findings. Our assessment of transactional sex focused only on situations where the respondent reported the relationship to have been transactional. As noted above, it is not uncommon for parties to such relationships to disagree about motive and meaning, and for this to change over time. We also did not assess transactional sexual exchanges with other men, which does occur, albeit rarely, in this population. Nonetheless, a key strength of our work is the detailed measurement of violence and extensively pre-tested and culturally tailored assessment of transactional sex and other sexual behaviour which allowed us to explore key hypotheses about the relationships between material exchange in relationships and gender-based violence.

Conclusions

We have demonstrated that transactional sexual relationships, whether such exchanges involve giving or getting resources, are strongly correlated with increased perpetration of gender-based violence by young men and therefore likely to fit within a broader continuum of men's exercise of gendered power and control over women's sexuality. In particular, the association between perpetrating violence and getting money or goods from sex partners suggests that simple financial empowerment of women may not decrease gender power dynamics or violence risk. Our findings suggest that interventions which seek to explicitly transform ideas of masculinity that privilege heterosexual success with and control over women will be more effective that those that address only individual risk behaviour in reducing incidence of transactional sex, HIV risk, and gender-based violence.

Acknowledgements

This study was funded by the National Institute of Mental Health grant number MH 64882-01 and the South African Medical Research Council. Dr. Dunkle's participation was supported by funding from the Harry F. Guggenheim Foundation and

by a CFAR03 Developmental Grant from the Emory Center for AIDS Research. We thank all of our study participants for their time and generosity in sharing their lives with us. We acknowledge the Planned Parenthood Association of South Africa Eastern Cape Branch for serving as our partner in the study intervention and the National Institute for Communicable Diseases testing and storage of specimens and quality control. We thank our field nurses & field workers: Leslie Setheni, Veliswa Gobinduku, Mthokozisi Madiya, Bongwekazi Rapiya, Sanele Mdlungu, Ayanda Mxekezo, Lungelo Mdekazi, Nocawe Mxinwa, Andiswa Njengele and Mvuyo Mayisela and our qualitative research team: Khanyisile Bakan, Siyabulela Sinkoyi, Linda Shute, Lindiwe Farlane, as well as Bomkazi Mnombeli, Engela Gerber, Dikeledi Moti, Alta Hansen, and Martie Swart for their support with data management, data entry & study administration, and Dr. Adrian Puren, and Prof. Daniel Kayongo, who served as advisors on biological aspects of the study; and finally, we thank Chief Sindile Mtirara and all the members of the Community Advisory Board.

References

Bernstein, D., Stein, J., Newcomb, M., et al. (2003). Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse and Neglect*, *27*, 169–190.

Campbell, C. (2003). *Letting them die: Why HIV/AIDS intervention programmes fail*. Cape Town: Double Storey/a Juta Company.

Caldwell, J., Caldwell, P., & Quiggin, P. (1989). The social context of AIDS in Subsaharan Africa. *Population and Development Review*, *15*, 185–234.

Carrier, J. (1991). Gifts, commodities, and social relations: A Maussian view of exchange. *Sociological Forum*, *6*(1), 119–136.

Dunkle, K. L., Jewkes, R. K., Brown, H. C., Gray, G. E., McIntyre, J. A., & Harlow, S. D. (2004a). Transactional sex among women in Soweto, South Africa: Prevalence, risk factors and association with HIV infection. *Social Science & Medicine*, *59*, 1581–1592.

Dunkle, K. L., Jewkes, R. K., Brown, H. C., Gray, G. E., McIntyre, J. A., & Harlow, S. D. (2004b). Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *Lancet*, *363*(9419), 1415–1421.

Dunkle, K. L., Jewkes, R. K., Brown, H. C., Yoshihama, M., Gray, G. E., McIntyre, J. A., et al. (2004). Prevalence and patterns of gender-based violence and revictimization among women attending antenatal clinics in Soweto, South Africa. *American Journal of Epidemiology*, *160*(3), 230–239.

Dunkle, K. L., Jewkes, R. K., Nduna, M., Levin, J. B., Jama, N., Khuzwayo, N., et al. (2006). Perpetration of partner violence and HIV risk behavior among young men in the rural Eastern Cape, South Africa. *AIDS*, *20*, 2017–2114.

Helle-Valle, J. (1999). Sexual mores, promiscuity and 'prostitution' in Botswana. *Ethnos*, *64*(3), 372–396.

Hunter, M. (2002). The materiality of everyday sex: Thinking beyond 'prostitution'. *African Studies*, *61*(1), 99–120.

Jewkes, R., Penn-Kekana, L., Levin, J., Ratsaka, M., & Schrieber, M. (2001). Prevalence of emotional, physical and sexual abuse of women in three South African provinces. *South African Medical Journal Suid-Afrikaanse Tydskrif Vir Geneeskunde*, *91*(5), 421–428.

Jewkes, R., Vundule, C., Maforah, F., & Jordaan, E. (2001). Relationship dynamics and teenage pregnancy in South Africa. *Social Science & Medicine*, *52*(5), 733–744.

Jewkes, R., Nduna, M., Levin, J., Jama, N., Dunkle, K., Khuzwayo, N., et al. (2006). A cluster randomized-controlled trial to determine the effectiveness of Stepping Stones in preventing HIV infections and promoting safer sexual behaviour amongst youth in the rural Eastern Cape, South Africa: Trial design, methods and baseline findings. *Tropical Medicine and International Health*, *11*(1), 3–16.

Jewkes, R. K., Nduna, M., & Jama, N. (2002). *Stepping Stones: A training manual for sexual and reproductive health communication and relationship skills* (Second South African Edition). Pretoria: Gender and Health Group, Medical Research Council.

Jewkes, R. K., Nduna, M., Jama, N., Dunkle, K. L., & Levin, J. B. (2002). Steadys, roll-ons and hit and runs: using indigenous typology to measure number of sexual partners, In *XIV international AIDS conference.* Barcelona.

Jewkes, R. K., Dunkle, K. L., Nduna, M., Levin, J. B., Jama, N., Khuzwayo, N., et al. (2006). Rape perpetration by young, rural South African men: Prevalence, patterns and risk factors. *Social Science & Medicine*, *63*, 2929–2961.

Kaufman, C. E., & Stavrou, S. E. (2004). ''Bus fare please'': The economics of sex and gifts among young people in Urban South Africa. *Culture, Health and Sexuality*, *6*(5), 377–391.

Knight, R. A., & Sims-Knight, J. E. (2003). The developmental antecedents of sexual coercion against women: Testing alternative hypotheses with structural equation modelling. *Annals of the New York Academy of Sciences*, *989*(1), 72–85.

Leclerc-Madlala, S. (2001). Chasing King Cash could prove to be our undoing. *Mail and Guardia,* South Africa.

Leclerc-Madlala, S. (2003). Transactional sex and the pursuit of modernity. *Social Dynamics*, *29*(2), 213–233.

Luke, N. (2003). Age and economic asymmetries in the sexual relationships of adolescent girls in sub-Saharan Africa. *Studies in Family Planning*, *34*(2), 67–86.

Luke, N. (2005a). Investigating exchange in sexual relationships in sub-Saharan Africa using survey data. In S. J. Jejeebhoy, I. Shah, & S. Thapa (Eds.), *Sex without consent: Young people in developing countries*. London: Zed Books.

Luke, N. (2005b). Confronting the 'sugar daddy' stereotype: Age and economic asymmetries and risky sexual behavior in urban Kenya. *International Family Planning Perspectives*, *31*(1), 6–14.

Luke, N. (2006). Exchange and condom use in informal sexual relationships in urban Kenya. *Economic Development and Cultural Change*, *52*(2), 319–348.

MacPhail, C., & Campbell, C. (2001). 'I think condoms are good but, aai, I hate those things': Condom use among adolescents and young people in a Southern African township. *Social Science & Medicine*, *52*(11), 1613–1627.

Malamuth, N. M. (2003). Criminal and noncriminal sexual aggressors: Integrating psychopathology in an hierarchical-mediational confluence model. *Annals of the New York Academy of Sciences*, *989*, 33–58.

Matasha, E., Ntembelea, T., Mayaud, P., Saidi, W., Todd, J., Mujaya, B., et al. (1998). Sexual and reproductive health among primary and secondary school pupils in Mwanza, Tanzania: Need for intervention. *AIDS Care*, *10*(5), 571–582.

Meekers, D., & Calves, A.-E. (1997). "Main" girlfriends, girlfriends, marriage and money: The social context of HIV risk behavior in sub-Saharan Africa. *Health Transition Review*, *7*(suppl.), 361–375.

Nyanzi, S., Pool, R., & Kinsman, J. (2001). The negotiation of sexual relationships among school pupils in south-western Uganda. *AIDS Care*, *13*(1), 83–98.

Nzyuko, S., Lurie, P., McFarland, W., Leyden, W., Nyamwaya, D., & Mandel, J. S. (1997). Adolescent sexual behavior along the Trans-Africa Highway in Kenya. *AIDS*, *11*(1).

Orubuloye, I., Caldwell, J., & Caldwell, P. (1992). Diffusion and focus in sexual networking: Identifying partners and partners' partners. *Studies in Family Planning*, *23*(6), 343–351.

Pettifor, A. E., Kleinschimdt, I., Levin, J. B., Rees, H. V., MacPhail, C., Madikizela-Hlonwa, L., et al. (2005). A community-based study to examine the effect of a youth HIV prevention intervention on young people aged 15–24 in South Africa: Results of the baseline survey. *Tropical Medicine and International Health*, *10*(10), 971–980.

Pulerwitz, J., Gortmaker, S., & DeJong, W. (2000). Measuring sexual relationship power in HIV/STD research. *Sex Roles*, *42*(7/8), 637–660.

Saunders, J., Aaland, O., Babor, T., de la Fuente, J., & Grant, M. (1993). Development of the Alcohol Use Disorders Screening Test (AUDIT). WHO collaborative project on early detection of persons with harmful alcohol consumption. II. *Addiction*, *88*, 791–804.

Silberschmidt, M., & Rasch, V. (2001). Adolescent girls, illegal abortions and "sugar-daddies" in Dar es Salaam: Vulnerable victims and active social agents. *Social Science & Medicine*, *52*(12), 1815–1826.

Wojcicki, J. M. (2002). Commercial sex work or ukuphanda? Sex-for-money exchange in Soweto and Hammanskrall area, South Africa. *Culture, Medicine and Psychiatry*, *26*, 339–370.

Wojcicki, J. M., & Malala, J. (2001). Condom use, power and HIV/AIDS risk: Sex-workers bargain for survival in Hillbrow/Joubert Park/Berea, Johannesburg. *Social Science & Medicine*, *53*(1), 99–121.

Wood, K., & Jewkes, R. (2001). "Dangerous" love: Reflections on violence among Xhosa township youth. In R. Morrell (Ed.), *Changing men in South Africa*. Pietermaritzburg: University of Natal Press.

World Health Organization. (2000). *WHO multi-country study on women's health and domestic violence: Core questionnaire and WHO instrument—version 9*. Geneva: World Health Organization.