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Rape perpetration by young, rural South African men: Prevalence, patterns and risk factors

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Abstract

Sexual violence is a well-recognised global health problem, but there has been remarkably little research on men as perpetrators. The objectives of this paper are to describe the prevalence, patterns and factors associated with rape of an intimate partner and a woman who was not a partner with men aged 15–26 years in rural South Africa.

The analysis presented here is of data collected during a baseline survey of participants in a cluster randomised controlled trial of an HIV behavioural intervention. A total of 1370 male volunteers were recruited from 70 rural South African villages. They completed a questionnaire asking about background, sexual practices and perpetration of rape and intimate partner violence.

Among these men 16.3% had raped a non-partner, or participated in a form of gang rape; 8.4% had been sexually violent towards an intimate partner; and 79.1% had done neither. The mean age of first rape was 17 years. There was overlap between rape of a non-partner and partner, in that 44.3% of men who raped an intimate partner had also raped a non-partner, but overall the great majority of men who raped did not disclose both types of rape. The factors associated with rape of an intimate partner and non-partner had similarities and differences. After adjusting for the other variables, both forms of rape were strongly associated with ever having been physically violent to a partner, having had transactional sex with a casual partner and more sexual partners. Non-partner rape was also associated with peer-related variables, including gang membership and peer pressure to have sex, and also drug use. Non-partner rape was more common among wealthier and relatively more socially advantaged men. Both types of rape were associated with having more adverse childhood experiences. There was considerable overlap between rape-associated factors and known HIV risk factors, suggesting a need for further research on the interface of rape and HIV, and integrated prevention programming.

Keywords: Rape; Sexual violence; Male perpetrators; South Africa

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Introduction

South Africa has a particularly high prevalence of rape. With 45,825 rapes of women of all ages reported to the police between 1 April 2003 and 31 March 2004 (SA Police Service October, 2004), the rate of reported rape is 194 per 100,000 female population. This is at least three times higher than, for example, the rate in the United States (US Department of Justice Uniform Crime Reports, 2004). When research is conducted, the rate of rape estimated from disclosure to survey interviewers is uniformly many times higher than rates calculated from reports of cases to the police (Jewkes & Abrahams, 2002; Tjaden & Thoennes, 2006; Walby & Allen, 2004). Small focused studies in South Africa have found sexual violence to be experienced by many women. For example, a study of women ($n = 1395$) in antenatal clinics found that 9.7% disclosed rape by an intimate partner in the year prior to the study, and 20.1% had experienced it at some stage in their lifetime (Dunkle et al., 2004a).

There has been very little research conducted in South Africa on men as rapists. Notable local exceptions are a survey of working men ($n = 1368$) in Cape Town (Abrahams, Jewkes, Hoffman, & Laubscher, 2004), 15.3% of whom reported sexually coercing a female partner of the previous decade; and ethnographic research undertaken in the rural Eastern Cape (Wood, 2005; Wood & Jewkes, 2001; Wood, Lambert, & Jewkes, in press) and Limpopo Provinces (Niehaus, 2005). The ethnographic research findings resonate with the conclusions of early feminist authors on rape (e.g., Brownmiller, 1975) in providing descriptions of processes through which rape is used as part of an overall strategy of asserting dominance over and control of women, but also point to rape as a vehicle for self-communication by men about their powerfulness (Jewkes, Penn-Kekana, & Rose-Junius, 2005). Wood & Jewkes (2001) described how control of women was a key aspect of 'successful' masculinity among many young men, primarily defined in terms of their ability to have the right partner (one most desirable to others), to have a greater number of partners and to control their girlfriends. Masculinity was constructed and evaluated in on-going acts of competition in relation to male peers, with sexual conquest being regarded as a sign of status, whether achieved by wooing, begging, trickery, or, ultimately, the use of force (Wood & Jewkes, 2001; Wood et al., in press). In the rural Eastern Cape, most men prided themselves on their persuasive abilities and regarded the use of force to get sex as 'unmanly'. None the less in the context of a dominant ideal that men should be in control of women, some men use rape as a means of engaging with fantasies of power (Niehaus, 2005; Wood & Jewkes, 2001).

Globally, the body of literature on men as rape perpetrators has particular limitations. Studies are almost exclusively North American, usually with small samples, and overwhelmingly participants have been drawn from college students or incarcerated rapists (Abel & Rouleau, 1990; Bachar & Koss, 2001; Drieschner & Lange, 1999). The research has generally not differentiated between findings related to rape of partners and non-partners. Research undertaken in developing countries (e.g., Abrahams et al., 2004; Martin et al., 1999) has tended to focus on rape of intimate partners, rather than non-partners, either because the latter were not measured, or the reported prevalence was very low.

Data collected in the rural Eastern Cape Province of South Africa, in the course of a research project evaluating an HIV prevention intervention (Jewkes et al., 2006) with a large group of young men, have provided an opportunity to explore aspects of rape perpetration quantitatively. We describe here the prevalence, patterns and factors associated with rape of intimate partners and non-partners by young men.

Methods

Between 2002 and 2003, we recruited 1370 men aged 15–26 years into a cluster randomised controlled trial to evaluate the HIV prevention behavioural intervention Stepping Stones (Jewkes, Nduna, & Jama, 2002). Women were also recruited but are not discussed further here. A detailed description of the trial methods, participant recruitment, scales and measures used is presented elsewhere (Jewkes et al., 2006). The participants were volunteers from 70 study villages in the rural Eastern Cape province of South Africa near the town of Mthatha. Most were recruited from schools after a meeting at which the study was explained. They were told they would be asked to complete questionnaires in face-to-face interviews and give blood for HIV testing at intervals over 2 years, and to attend the HIV prevention intervention. They were also told they would receive R20 (~£2) after each round of data collection. Between 15 and 25

men per village completed the baseline structured questionnaire, administered in Xhosa by young male interviewers.

Defining and measuring rape

We have separated the categories of rape of a non-partner and partner for this analysis. While we do not know how perpetrators perceive rape of different types, long-term ethnographic research in South Africa has shown that the meanings of rape for partner and non-partner victim/survivors differ, albeit these two categories may overlap. Partner rape is frequently (but not always) re-interpreted by victim/survivors as stemming from overwhelming affection. Men who are not boyfriends may also force women into sex in acts that come to mark the commencement of relationships, and thenceforth the women may describe their experience as 'forced sex', conceptually distinct from 'rape'. This enables women in these situations to avoid the stigma of 'being raped', and some of the associated trauma (Wood et al., in press). Overlap is also seen in a locally prevalent form of gang rape, known as streamlining, which is often perpetrated against the girlfriend of one of the men (Wood, 2005; Niehaus, 2005). Streamlining is essentially a rape by two or more perpetrators. It is an unambiguously defiling and humiliating act, and is often a punishment, yet at the same time it is an act that is often regarded by its perpetrators as rooted in a sense of entitlement, or legitimacy (Wood, 2005). A woman may be streamlined to punish her for having another partner; for behaving outside gender norms (e.g., when deeply intoxicated)(Wojcicki, 2002); for being successful, or for imagining she could be superior. Streamlining is sometimes an act of male bonding, a 'favour' to the boyfriend's friends (Niehaus, 2005; Wood, 2005). In instances when a boyfriend organises for his girlfriend to be streamlined, it would terminate the relationship and is not open to any reinterpretation (Wood, 2005). Taking our lead from victim/survivors, we have determined that streamlining is best understood as part of a category of non-partner rape; and that acts of forced sex and rape against someone who becomes a partner should be seen as part of intimate partner rape.

Rape of non-intimate partners was assessed by questions: 'Was there a time when you made a woman or girl, other than your girlfriend at the time, have sex with you when she did not want to?' and 'Was there a time when you made a woman or girl, other than your girlfriend at the time, have sex with you when she was too drunk to say whether she wanted it?' Two gang rape questions were 'Have you ever done streamlining?' and '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?' A man was considered to have ever raped a non-partner if he responded affirmatively to any individual or group rape question. He was considered to have undertaken group rape if he answered affirmatively to either of the two questions. During 1 month of fieldwork, men who disclosed that they had done streamlining were asked briefly to describe how it happened and the answers recorded.

We measured intimate partner sexual violence using questions from the World Health Organisation's instrument (WHO, 2000), modified to capture perpetration. This was also the measure used for physical partner violence. The questions contained specific, objective descriptions of six physically violent practices: pushed, shoved, slapped, hit with fist, kicked, beaten up, strangled, burnt, hurt/threatened with a weapon, threw something that could hurt her, and their frequency. Rape was assessed by two sets of four questions that asked about acts 'in the past 12 months' or 'before the past 12 months'. These asked about 'physically forcing' a girlfriend 'to have sex when she didn't want to'; whether the respondent thought a girlfriend had sex when she did not want to because she was afraid of what he might do; and forcing a girlfriend to have oral or anal sex when she did not want to. A man was considered to have ever raped an intimate partner if he responded affirmatively to any of these eight questions.

Questionnaire

The questionnaire asked about social and demographic factors (including age, education, activity in church, club membership and earnings). Socioeconomic status was measured on a scale derived for the study because of problems with use of standard measures (such as housing quality indices) in the study area. The scale captured household goods ownership (TV, radio and car), frequency of hunger, frequency of having meat and perceived difficulty accessing a fairly small sum of money for a medical emergency (R100 or £9) (Cronbach's α 0.60). Adverse childhood experiences were measured on a modified version of the short form of the

Childhood Trauma Questionnaire (Bernstein, Fink, & Hendelsman, 1994). It covered emotional neglect, emotional abuse, physical neglect/hardship, physical abuse and sexual abuse (Cronbach's α 0.72). We also asked about residence with biological parents during childhood.

We measured perceived susceptibility to peer pressure to have sex on a scale of three questions (Cronbach's α 0.72). We asked about numbers of primary and non-primary female partners and history of transactional sex with a non-primary partner, which was defined as sex primarily motivated by material gain (for either the man or woman) (Dunkle et al., 2004b). We measured alcohol use using the AUDIT scale (Saunders, Aasland, Babor, de la Fuente, & Grant, 1993), which has 12 items and asks about the frequency, quantity and consequences of drinking. We used a cut-off point of 8 for 'problem drinking'. We measured drug use by asking about ever use of dagga (marijuana), benzene, mandrax, injected drugs or other drugs and dichotomised respondents as ever/never users.

Physical violence against intimate partners was assessed using the above-mentioned instrument. There were six items covered the following physically violent practices: pushed, shoved, slapped, hit with fist, kicked, beaten up, strangled, burnt, hurt/threatened with a weapon, threw something that could hurt her. Communication skills were measured using a 6-item scale (Cronbach's α 0.68), with questions asking about approaches to 'usual' communication in the relationship. Items included acts that were verbally abusive. Further information on the questionnaire is presented in Jewkes et al. (2006). Written informed consent was given. Ethical approval for the study was given by the University of Pretoria.

Statistical analysis

All analysis took into account the study design, viewing the baseline study as a stratified, two-stage survey with participants clustered within villages. First descriptive analyses were carried out, in which all potential explanatory variables were summarised by whether or not the participant had reported the two types of rape. Continuous variables were summarised by calculating means with 95% confidence intervals, while binary and categorical variables were summarised by percentages, together with 95% confidence intervals. Estimation was carried out using standard methods for estimating confidence intervals from complex multistage sample surveys (Taylor linearisation) as implemented in the survey analysis modules in the statistical package Stata 8.0.

To fit models to investigate factors associated with raping a non-partner and raping an intimate partner, the following procedure was followed. The variables were divided into three blocks, as shown in Tables 1 and 2. Communication skills used in a relationship with a current partner were also tested in the model, but we do not present the full models with this variable as it was not available for men who had no current partner ($n = 94$). First backward elimination was applied to the first block of factors using ordinary logistic regression in order to identify a maximal subset of potential explanatory variables using a liberal nominal p-value for exclusion (of 0.15) (after Vittinghoff, Glidden, Shiboski, & McCulloch, 2005, Chapter 5). Retaining all variables thus selected, backward elimination was applied to the block two factors in the same way as above and then the process was repeated for the block three factors.

To account for clustering of respondents within villages, generalised linear mixed models (GLMM) were then fitted to the maximal set of explanatory factors. To obtain the likelihood function for the observed data, the random effects have to be integrated out of the likelihood. Since we had only one extra random effect, we used the preferred method for this, which is Gauss–Hermite quadrature (Skrondal & Rabe-Hesketh, 2004). Checks were carried out by varying the number of quadrature points and fitting approximate GLMMs using penalised quasi-likelihood (PQL) (Breslow & Clayton, 1993) if there was evidence of a change in estimates. Analyses were carried out using Stata release 8.0, and where required GLMMs via PQL checks were fitted using Genstat version 6.

Results

The prevalence and patterns of rape perpetration are shown in Fig. 1. Of the 1370 respondents, 223 men (16.3%, 95% CI 14.1–18.4%) reported having raped a non-partner or participating in streamlining. Of these, 190 men (13.9%, 95% CI 11.7–16.1%) only reported streamlining. Some of the descriptions of how streamlining was done are presented in Box 1. These clearly highlight the use of trickery, manipulation and force, as well as the collusion of

Table 1
Non-partner rape: social, demographic and background characteristics of men who raped a non-partner compared with those who never raped a non-partner

	Raped a non-partner ($n = 223$)		Never raped a non-partner ($n = 1147$)	
		95% CI		95% CI
Block one candidate variables				
Mean age	19.04	18.76, 19.33	19.17	18.99, 19.34
Educated to grade 10 or above	43.5%	35.6, 51.4	43.2%	37.7, 48.8
Mean adverse childhood experiences score	0.25	0.11, 0.39	−0.05	−0.11, 0.02
Mean socio-economic status score	0.29	0.05, 0.54	−0.06	−0.19, 0.08
Active in church	48.4%	41.4, 55.4	47.1%	43.2, 51.0
Ever earned money	40.8%	34.9, 46.7	30.0%	26.8, 33.2
Mother educated to high school level or further	78.9%	73.0, 84.8	63.5%	59.4, 67.5
Involved in a club/society	81.2%	75.5, 86.8	72.6%	68.4, 76.8
Lived with parents most of the time in childhood				
Both	25.6%	20.2, 31.8	26.1%	22.9, 29.5
Mother only	30.0%	23.7, 37.2	33.9%	31.1, 36.9
Father only	4.9%	2.7, 8.7	2.9%	2.0, 4.0
Neither	39.5%	35.2, 47.1	37.1%	32.7, 41.8
Block two candidate variables				
Peer pressure resistance	−0.28	−0.44, −0.12	0.054	−0.024, 0.13
Problem drinking	40.8%	33.8, 47.9	22.1%	19.1, 25.2
Drug use (ever)	51.6%	44.1, 59.0	35.7%	31.9, 39.6
Ever a gang member	15.2%	10.5, 20.0	4.8%	3.4, 6.2
Block three candidate variables				
Ever physically violent towards an intimate partner	47.5%	41.5, 53.6	22.7%	19.9, 25.4
Transactional sex with a non-primary partner	35.0%	28.4, 41.6	13.0%	10.5, 15.5
Mean score on communication skills scale	0.34	0.18, 0.49	−0.048	−0.14, 0.049
No. of lifetime partners				
None	0.9%	0.2, 3.6	7.4%	5.6, 9.7
One	0.9%	0.2, 3.6	11.1%	9.2, 13.2
2–5	30.9%	24.2, 38.6	48.3%	45.3, 51.3
6–10	32.3%	26.0, 39.3	21.9%	19.4, 24.5
11–15	20.2%	15.9, 25.3	6.4%	5.0, 8.0
16+	14.8%	11.0, 19.6	5.0%	3.9, 6.4

male peers in acts of punishment of someone's girlfriend. Overall, 115 men reported having raped an intimate partner (8.4%, 95% CI 6.7–10.1%), and 1083, or 79.1%, perpetrated no rape. Fifty-one men raped both a partner and a non-partner (Fig. 1). We have information on the age of first intimate partner rape for 63 of these 115 men. The age ranged from 9 to 21 years with a mean of 16 years (95% CI 15.5–16.5).

One hundred and three men (7.5%) reported having attempted to rape a non-partner, and we have information on the age of first attempted rape for all these men; this ranged from 10 to 24 years with a mean of 17 years (95% CI 16.5–17.6). We have information on the mean age at first non-partner rape for 51 men; this ranged from 11 to 21 years, with a mean of 17 years (95% CI 16.4–17.6 years). Of these 51 men, 31 (60.8%) had once raped a non-partner, 17 (33.3%) did so a few times and 3 (5.9%) had done so many times.

Table 1 shows the distribution of key social and demographic factors, behavioural variables, and sexual risk factors according to whether or not the respondent reported non-partner rape. Men who raped a non-partner reported more adverse childhood experiences, higher socio-economic status, a greater likelihood of earnings in the past year, and more educated mothers. They did not differ from non-rapists in their church attendance. Men who raped were more commonly members of other clubs and gangs. They reported a lower resistance to peer pressure to have sex, drank more alcohol and were more likely to have used drugs. They were more likely to have been physically violent towards an

Table 2
Intimate partner rape: social, demographic & background characteristics of men who raped a partner compared with those who never raped a partner

	Raped a partner ($n = 115$)		Never raped a partner ($n = 1255$)	
		95% CI		95% CI
Block one candidate variables				
Mean age	19.07	18.68, 19.46	19.15	19.98, 19.32
Educated to grade 10 or above	44.3%	34.3, 54.4	43.2%	37.8, 48.6
Mean adverse childhood experiences score	0.42	0.22, 0.62	−0.04	−0.10, 0.02
Mean socio-economic status score	0.21	−0.10, 0.51	−0.02	−0.16, 0.12
Active in church	50.4%	39.9, 61.0	47.0%	43.3, 50.7
Ever earned money	39.1%	30.0, 48.2	31.1%	27.9, 34.3
Mother educated to high school level or further	79.1%	70.4, 87.9	64.8%	60.9, 68.6
Involved in a club/society	84.3%	76.7, 92.0	73.1%	68.8, 77.3
Lived with parents most of the time in childhood				
Both	32.2%	23.7, 42.0	25.4%	22.6, 28.5
Mother only	37.4%	29.6, 45.9	32.9%	30.1, 35.9
Father only	4.3%	1.8, 9.9	3.1%	2.2, 4.3
Neither	26.1%	18.0, 36.3	38.6%	34.2, 43.2
Block two candidate variables				
Peer pressure resistance	−0.20	−0.39, −0.016	0.019	−0.05, 0.091
Problem drinking	43.5%	33.3, 53.6	23.5%	20.2, 26.8
Drug use (ever)	48.7%	38.0, 59.4	37.4%	33.4, 41.4
Ever a gang member	13.9%	7.8, 20.0	5.8%	4.3, 7.3
Block three candidate variables				
Ever physically violent towards an intimate partner	59.1%	51.3, 67.0	23.7%	20.9, 26.6
No. of lifetime consensual partners	9.7	8.1, 11.2	6.3	5.9, 6.8
Transactional sex with a non-primary partner	41.7%	33.4, 50.0	14.3%	11.7, 16.8
Mean score on communication skills scale	0.50	0.31, 0.69	−0.048	−0.14, 0.049
No. of lifetime partners				
None	0.9%	0.1, 6.1	6.9%	5.2, 9.0
One	2.6%	0.9, 7.7	10.0%	8.4, 12.0
2–5	31.3%	23.2, 40.6	46.8%	43.8, 49.7
6–10	35.7%	26.8, 45.6	22.5%	20.0, 25.2
11–15	15.7%	10.5, 22.7	8.0%	6.6, 9.6
16+	13.9%	8.8, 21.4	5.9%	4.8, 7.3

intimate partner, to have had transactional sex with a non-primary partner, and to report using poorer communication skills with their current partner. They also had more consensual sexual partners.

The distribution of the same variables presented according to whether or not the respondent reported intimate partner rape is shown in Table 2. Men who had raped an intimate partner had many of the same characteristics of those who raped non-partners, except that they were more likely to have spent most of their childhood living with one or both of their biological parents. They were not particular susceptible to peer pressure to have sex, but were more likely to have been in a gang.

The results of fitting a series of GLMMs of factors associated with having reported ever raped a non-partner are presented in Table 3. Two models are presented, the first with demographic, social and childhood variables as well as substance use and peer-related variables. Rape of a non-partner was associated with having higher socio-economic status, having more adverse childhood experiences, having a more educated mother, membership of gangs, drug and alcohol use and resistance to peer pressure to have sex. The second model consisted of factors associated with raping a non-partner and included having more lifetime consensual partners, transactional sex with a casual partner and physical partner violence perpetration. These were strongly associated with rape perpetration,

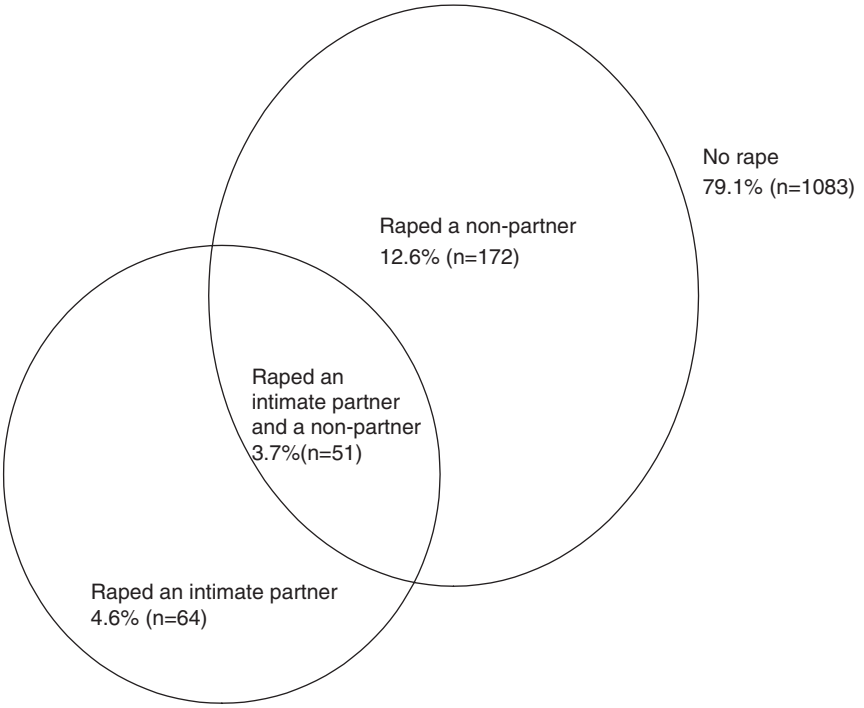

Fig. 1. Venn diagram showing the proportion of men who disclosed perpetration of different types of rape.

Box 1
Men's accounts of how they came to do streamlining.

It was at night at church, our friend went over to a certain girl and he spoke to her. They agreed to have sex at the back of the church hall, then in the process we appeared and we streamlined her. There were four of us.

She was my friend's girlfriend…and my friend was not in love with her anymore, because of her promiscuity. He called us during the day and told us at night we must streamline her. Then he fetched her at her home and took her to his home. We were three including the boyfriend. Then we made a plan on how we are going to do it so that she cannot notice what we will be doing. My friend, her boyfriend, started and we followed after him and we all did one round and we left.

We asked the girl to give in and she agreed, there were five of us. The girl used to love our company, may be she was trying to prove herself to us. It was winter and my first sexual experience.

We were two and we met a girl from our neighbourhood and we pleaded with her to have sex with us, at first she refused and we forced her until she agreed to it. We were touching her while we were pleading with her till she agreed…We were out in the fields, afterwards we up and left.

We were two, she was my friend's girlfriend. My friend was no longer in love with her, so he wanted to dump her, so we decided that I propose to her and she accepted my love proposal. So I picked her up at my home and I called my friend and we both had sex with her, we told her that because we are both her boyfriends she has to allow us both to have sex with her.

Table 3
Non-partner rape: multiple logistic regression models of factors associated with having ever done streamlining or otherwise raped a non-partner

	Model 1: Demographic and childhood factors, substance use and peer pressure			Model 2: Including sexual risk behaviours and other violence		
	OR	95% CI	*p*-value	OR	95% CI	*p*-value
Socio-economic status scale	1.15	1.03, 1.29	0.017	1.14	1.01, 1.28	0.035
Adverse childhood experiences scale	1.17	1.02, 1.35	0.026	1.13	0.97,1.31	0.116
Mother had any high school education	1.87	1.28, 2.73	0.001	1.69	1.15, 2.50	0.008
Resistance to peer pressure to have sex (scale)	0.70	0.60, 0.82	<0.0001	0.74	0.63, 0.86	<0.001
Problem drinking	1.70	1.22, 2.36	0.002	1.12	0.79, 1.59	0.519
Ever a gang member	2.25	1.36, 3.73	0.002	2.10	1.25, 3.53	0.005
Ever drug use	1.63	1.19, 2.24	0.002	1.53	1.11, 2.12	0.010
Transactional sex with a non-primary partner				1.57	1.07, 2.29	0.020
Ever physically violent towards an intimate partner				1.87	1.33, 2.62	<0.001
No. of lifetime partners						
0–1				1.00		
2–5				5.04	1.79, 14.18	0.002
6–10				9.45	3.33, 26.78	<0.001
11+				17.11	5.95, 49.22	<0.001

Table 4
Intimate partner rape: multiple logistic regression models of factors associated with having ever raped an intimate partner

	Model 1: Demographic and childhood factors, substance use and peer pressure			Model 2: Including sexual risk behaviours and other violence		
	OR	95% CI	*p*-value	OR	95% CI	*p*-value
Adverse childhood experiences scale	1.35	1.14, 1.60	0.001	1.33	1.10, 1.60	0.002
Mother had any high school education	1.81	1.06, 3.07	0.029	1.38	0.83, 2.30	0.22
Lived with						
Both parents	1.00			1.00		
Mother only	0.81	0.50, 1.30	0.375	0.84	0.51, 1.38	0.49
Father only	0.93	0.34, 2.59	0.895	0.75	0.25, 2.22	0.60
Neither	0.47	0.28, 0.79	0.264	0.55	0.32. 0.96	0.035
Problem drinking	2.02	1.34, 3.04	0.001	1.28	0.82,1.98	0.281
Transactional sex with a non-primary partner				2.06	1.30, 3.26	0.002
Ever physically violent towards an intimate partner				2.78	1.79, 4.30	<0.001
No. of lifetime partners						
0–1				1.00		
2–5				2.29	0.79, 6.56	0.127
6–10				4.09	1.39, 12.02	0.010
11+				4.34	1.42, 13.24	0.010

alongside drug use, gang membership, susceptibility to peer pressure to have sex and having a more educated mother. Having poorer communication skills was significantly associated with risk of raping (OR 1.34; 95% CI, 1.12, 1.58). Adding this variable very slightly changed some of the point

estimates but not the overall picture presented by the model.

The results of fitting a series of GLMMs of factors associated with having reported ever raping an intimate partner are presented in Table 4. Again two models are presented, in the first we see that raping a partner was associated with having more adverse childhood experiences, having a more educated mother and problem drinking. Men who had spent most of their childhood living with neither biological parent were less likely to have raped a partner. The second model again shows that sexual and violent practices, namely having more lifetime consensual partners, transactional sex and physical violence perpetration, were strongly associated with intimate partner rape perpetration, as were having more adverse childhood experiences and a more educated mother. Again the lesser likelihood of rape among men who had lived with neither parent remains visible. Having poorer communication skills was significantly associated with risk of raping (OR 1.49 95% CI 1.19, 1.85). Adding this variable again very slightly changed some of the point estimates but not the overall picture.

Discussion

Rape perpetration was highly prevalent in the men interviewed, and the predominant form of rape reported was gang rape. The majority of men who raped had done so for the first time before 18 years of age, in keeping with findings from the USA (e.g., White & Hall Smith, 2004). Although the information we had on frequency was limited, it suggests that perpetration of multiple rapes was common (cf. White & Hall Smith, 2004). There was some overlap between reporting of the two types of rape, but less than 20% of perpetrators reported perpetration of both forms. In particular, most men who reported rape of a non-partner did not report partner sexual violence, although having been physically violent towards a partner was very common. North American research on rapists has often sought to distinguish men who sexually aggress 'complete strangers' (usually incarcerated when studied) from those who aggress 'acquaintances' (usually college students) (e.g., Malamuth, 2003). Our prevalence data provide limited support for such a distinction.

Both forms of rape were associated with experience of more adverse experiences in childhood. North American research has frequently reported a link between adverse childhood experiences, particularly sexual abuse and parental intimate partner violence, and rape perpetration (Malamuth, Linz, Heavey, Barnes, & Acker, 1985; Malamuth, Sockloskie, Koss, & Tanaka, 1991; Senn, Desmarais, Verberg, & Wood, 2000; White & Hall Smith, 2004). Most of the literature has focused on the role of sexual abuse, but like Knight and Sims-Knight (2003), we have shown here that there is an association with physical and emotional abuse. However, it seems that not living with biological parents may impact differently on young men from other forms of adverse experiences, as men who had lived with neither father nor mother were less likely to be sexually violent towards an intimate partner, perhaps because this led them to be more likely to seek emotional intimacy from her. Malamuth et al. (1991) argue that childhood trauma in some way influences developmental processes, which may include feelings of inadequacy, which are masked by anger, and an exaggerated need to control women sexually. In the South African context this seems plausible, however because we measured adverse childhood experiences up to age 18 (or age of interview), and rape perpetration was often before age 18, we cannot be sure that these experiences preceded the rape, rather than being a response to the rape or other anti-social behaviour of which the rape was one example.

Both types of rape were associated that having a more educated mother. We have discussed the probable relationship with maternal education with men on our Community Advisory Board and their advice was that we should interpret it as an indicator of higher social status. They went further to suggest a streamlining scenario where a woman might feel she could not refuse sex with a higher status man and so agreed, whereupon he called in his friends and gave them an opportunity to 'share what he had'. This could fit with the first description of streamlining in Box 1.

There is limited information on the relationship between social status and socio-economic status and rape perpetration, not least because they have often been controlled for, but not reported. The anthropologist Bourgois (1996) argues that among the men he studied in El Barrio, New York, ideals of masculinity were re-crafted to emphasise control over women, substance use, and participation in crime in the face of poverty and little or no prospect of employment, which restrict the alternative paths through which youth may demonstrate 'success'.

Malamuth et al. (1985) and Malamuth (1996) have also argued that 'masculine role stress' contributes to ideas of hostility towards women and desires for sexual dominance, which are important antecedents of sexual aggression. If poverty is taken as a cause, or key indicator, of 'masculine role stress', then our findings do not support such arguments. Rather than rape being a product of ideas of masculinity distorted by poverty, we have found that the more advantaged men, defined through maternal education, earning power or wealth, were more likely to rape, particularly non-partners. This is similar to the findings of Duvvury et al. (2002) that more educated men and those with higher socio-economic status in India were more likely to force sex on intimate partners and, while we do not know anything about the status of the men with respect to their victims, the conclusions of Handwerker (1998) that men in Barbados were more likely to be violent towards women if they were relatively more powerful. It also fits with analyses of rape as stemming from an "exaggerated sense of sexual entitlement" (Jenkins, 1998).

Rape of a non-partner was associated with variables that tapped into different aspects of male peer relations. These included (mostly criminal) gang membership, and perceiving peer pressure to have sex. The association between rape and involvement in delinquent peer associations is well established in the North American literature (Malamuth et al., 1985, 1991). It has been suggested that, unless specifically challenged, many forms of male peer association, including sports clubs, provide a context for the development of ideas of masculinity that are hostile and adversarial towards women. They may also provide the context for defining ideals of masculine success around sexual conquest of women, which can lead to having more sexual partners (Malamuth et al., 1991). It is notable that these factors were not found to be associated with rape of a partner, which highlights the difference between the isolated, versus (largely) group, nature of the two categories of rape. A little caution may again be advised with respect to the temporal sequence of events as we do not know whether gang membership preceded the rape, and it is possible that the experience of being involved in streamlining might make a man more susceptible to joining a gang, or perceiving himself as vulnerable to peer pressure to have sex.

Both types of rape were associated with heavy alcohol consumption. Non-partner rape was associated with drug use. Abbey, Zawacki, Buck, Clinton, and McAuslan (2004) describe alcohol as a 'situational factor' in rape, and drug use may also be so. Sexual assaults are very frequently associated with alcohol consumption (e.g., Ulllman, Karabatsos, & Koss, 1999; Abbey & McAuslan, 2004) and alcohol has been shown to play a disinhibiting role in certain types of sexual abuse (Araji & Finkelhor, 1986), as have some drugs (Grisso, Schwarz, & Hirschinger, 1999). Alcohol abuse was associated with many of the factors included in the models. It was more common among men in clubs, with earnings, with less resistance to peer pressure, who had had transactional sex, who had been physically violent to a partner and who had had more partners. However, a two-way association between raping and each of these listed factors was statistically significant in those who did not drink, suggesting that alcohol does not explain the association between these variables and risk of raping.

Number of sexual partners, experience of ever having had transactional sex and ever having been physically violent towards an intimate partner were all associated with both types of rape. The association between number of partners and raping has been well reported in North American literature (Malamuth et al., 1991; Malamuth et al., 1985; Senn et al., 2000) as well as in previous research from South Africa and India (Abrahams et al., 2004; Martin et al., 1999). Malamuth et al. (1991) suggest that men who develop a relatively high emphasis on sexuality, particularly with sexual conquest as a source of peer status and self-esteem, may use various means, including coercion, to induce girls into sexual acts. This seems to fit with qualitative research from South Africa (Wood & Jewkes, 2001). Transactional sex obviously represents another strategy for having sexual intercourse. It may also reflect what Malamuth et al. (1991) describe as an orientation to impersonal sexual relationships, rather than sex in the context of emotional bonding. Malamuth et al. (1991) have argued that this may result from experience of trauma childhood that reduces the ability of men to form loving and nurturing attachments in relationships. It may also partly reflect an exaggerated sexual drive.

The association between perpetration of physical intimate partner violence and rape is to be expected from the literature (Lisak & Miller, 2002). However, many previous studies have measured attitudes accepting of interpersonal violence and not actual

practices (Malamuth, 2003). Acceptance of interpersonal violence is measured by a standard instrument in North American rape research and is consistently shown to be associated with risk of raping (Rappaport & Burke, 1984; Malamuth et al., 1991; Malamuth et al., 1985). Unlike Malamuth et al. (1985, 1991), we did not find that our measure of attitudes towards gender relations and practice of controlling the girlfriend in the men's current main relationship were associated with an elevated likelihood of raping (data not reported). However, previous use of physical intimate partner violence was very strongly associated it.

We have shown some important differences in factors associated with raping a partner and non-partner. Men who raped women who were not partners were of higher socio-economic status and social status, more likely to be in gangs, and more clearly influenced by their peers. These latter findings may reflect the particularities of the South African setting where gang rape is very common. These findings are compatible with an explanation of non-partner rape as stemming from an exaggerated sense of sexual entitlement, and they are also compatible with notions of rape as fulfilment of fantasies of power discussed above (Wood & Jewkes, 2001; Jewkes et al., 2005; Niehaus, 2005). There are indications that neither group of men sought much emotional intimacy from their female (putatively consensual) sexual partners. This is suggested by the large number of partners, and clear dose response relationship between partner numbers and likelihood of having raped, the poor communication skills, transactional sex and high prevalence of physical partner violence perpetration. This is entirely compatible with ideas about masculinity that emphasise control of women and with the idea that non-intimate partner rape can in part be seen as an extension of patterns of power and control in intimate relationships to settings in the community, rather than merely as opportunistic crimes.

This study had a number of limitations. We have mentioned the difficulty in establishing the temporal sequence of some of the events. The sample was comprised of volunteers and so the prevalence estimates cannot be assumed to be generalisable to the general population of men of these ages in the area from which the sample was recruited. It is very difficult to be sure how this would have biased the findings. Most of the samples were recruited in schools, and it is usually assumed that youth who have dropped out of school are more likely to be involved in crime and associated violent behaviours. However, this assumption may be wrong, and it is also possible that men in school were more privileged and since this seemed to increase the risk of non-partner rape, perhaps it could have resulted in an exaggerated prevalence in our sample. It is possible that some of the men who reported participation in streamlining had been involved in organising it, but did not have sexual intercourse with the woman. Since they would, none the less, be charged with gang rape under, for example, the law in the United States we are not concerned about their possible presence in our streamlining category. Volunteer bias may have altered the relationships between variables in ways that are impossible to determine, but it does not seem likely that this would have had a substantial effect on the study's findings. In other respects, because it was a study with a small geographical base and had tightly controlled fieldwork (see Jewkes et al., 2006) we may have been successful in reducing misclassification arising as a result of under-reporting of violent practices and the sensitive sexual behaviour variables. We were not able to include all the measures in our questionnaire that have previously been associated with risk of raping. In particular, we did not have a measure of psychopathology, which has been associated with sexual offences and re-offending in incarcerated rapists (Rice & Harris, 1997; Porter et al., 2000), although it was not associated with sexual aggression in United States college students (Koss & Oros, 1982). We also have not included measures of all the key aspects of Hostile Masculinity (Malamuth, 2003).

Our study is an important landmark in the literature on rape epidemiology and is particularly interesting because of the high prevalence of both intimate and non-intimate partner rape. Our findings suggest that there are commonalities in factors associated with rape of intimate and non-intimate partners, which suggests that there are some underlying dynamics that are largely the same. We suggest that these dynamics related to the desire to seek power and control over women, rather than forming bonds of emotional intimacy with them. There are also important areas of difference. Only men who raped non-partners were of higher social and socio-economic status and more heavily influenced by peers. We suggest that having an exaggerated sense of sexual entitlement and enacting fantasies of power were particular important in these cases. It

is important to be cautious when making recommendations from one study; however, our findings support arguments that prevention of rape needs to start in childhood and in homes, with parenting that is non-violent and based on mutual respect. The young age of first rape perpetration suggests that specific rape prevention activities need to be introduced to boys in their early teens. Male peer associations, such as clubs and sports teams, as indicators of higher risk for raping, may be also be appropriate points of entry for rape prevention activities. The findings also highlight the deeply intertwined importance of particular constructions of masculinity in risk of sexual violence, physical intimate partner violence and HIV, further supporting the argument for the need for comprehensive prevention strategies that jointly address HIV risk, gender-based violence and misogynistic constructions of masculinity. Clearly there is also a need for more research. Bachar and Koss (2001) highlighted the scarcity of theory-driven interventions for men on rape. Preventing rape is essential for a society that prides itself on respect for human rights, and this goal severely hampered by the lack of research on rape and resources for developing and testing theory-driven interventions.

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