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# Beliefs About Sexual Intimate Partner Violence Perpetration Among Adolescents in South Africa

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## Abstract

Sexual intimate partner violence (IPV) is a public health problem worldwide. Research regarding beliefs about perpetrating sexual IPV is, however, limited. This study investigated attitudes, social influence, and self-efficacy beliefs and intentions toward perpetrating sexual IPV among Grade 8 adolescents ( $M$  age = 13.73,  $SD$  = 1.04) in the Western Cape Province of South Africa. The study sample was taken from the baseline data of the Promoting sexual and reproductive health among adolescents in Southern and Eastern Africa (PREPARE) study, a cluster-randomized controlled trial. Young adolescents ( $N$  = 2,199), from 42 randomly selected high schools, participated in the study and answered a paper-and-pencil questionnaire. Multivariate ANOVA were conducted to assess differences in beliefs and intention toward perpetrating sexual IPV between boys and girls, and between perpetrators and nonperpetrators. Results showed that boys were more frequently perpetrators (11.3% vs. 3.2%) and victims (13.6% vs. 6.4%)

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of sexual IPV than girls. Boys' attitudes toward perpetrating sexual IPV were more supportive than girls'. Boys perceived their social network to be more likely to think that putting pressure on a boyfriend or girlfriend to have sex is okay, and boys had a lower self-efficacy to refrain from pressuring a boyfriend or girlfriend to have sex compared with girls. Both boys and girls, who have perpetrated sexual IPV, had more tolerant attitude, social influence, and self-efficacy beliefs toward sexual IPV perpetration, compared with nonperpetrators. Intention not to perpetrate sexual IPV did not differ between boys and girls, or between perpetrators and nonperpetrators. Our findings suggest that interventions should address attitude and social influence beliefs regarding sexual IPV perpetration. More attention should be given to sexual IPV perpetration among boys. Given that sexual IPV victimization and perpetration are significantly linked, prevention of sexual IPV perpetration seems to be of utmost importance.

### **Keywords**

young adolescents, intimate partner violence, beliefs about violence, perpetrator, South Africa

### **Introduction**

Sexual intimate partner violence (IPV) is defined as behavior of forcing an intimate partner to engage in sex with both physical and nonphysical (e.g., spreading rumors) means (Centers for Disease Control and Prevention, 2016). The intimate partner can be a boyfriend or a girlfriend, a spouse or a lover (Saltzman, Green, Marks, & Thacker, 2000; World Health Organization [WHO], 2013). Possible consequences of sexual IPV include adverse health outcomes (e.g., physical injuries, depression, suicidal behavior, unwanted pregnancies, HIV) and high-risk behaviors (e.g., substance use and unsafe sex; Banyard & Cross, 2008; Choudhary, Coben, & Bossarte, 2008; Dunkle et al., 2004; Dunkle et al., 2006; Jewkes, Dunkle, Nduna, & Shai, 2010; Johnson, Giordano, Longmore, & Manning, 2014; Roberts & Klein, 2003; WHO, 2015). Sexual IPV occurs all around the world, and therefore it is seen as a public health problem (Krug, Mercy, Dahlberg, & Zwi, 2002).

Adolescent dating relationships are common in South Africa (Russell et al., 2014; Shamu et al., 2016). Shamu et al. (2016) reported that 52% of girls and 71% of boys of Grade 8 students (aged 12-19) in South Africa have been in a relationship. In these relationships, high levels of IPV have been reported: 40% of the girls reported that they have been victims of physical or

sexual IPV and 40% of boys reported physical or sexual IPV perpetration. A recent study among young adolescents ( $M$  age = 13.65,  $SD$  = 1.01) showed that boys were significantly more likely to report sexual IPV perpetration and sexual IPV victimization than young adolescent girls in Western Cape, South Africa (Mason-Jones et al., 2016). Of the boys, 11% reported sexual IPV perpetration and 11% sexual IPV victimization. For females, the prevalence rates were 3% for perpetration of sexual IPV and 5% for sexual IPV victimization.

Jewkes (2002) suggested that IPV is a product of its social contexts. Therefore, an ecological approach focusing on sociodemographic factors is necessary in preventing IPV. Also, behavioral theories can be used to identify determinants of sexual IPV perpetration (Flisher, Myer, Mèrais, Lombard, & Reddy, 2007). The theoretical framework of this article is the Integrated Change model (I-Change model; De Vries et al., 2003). The model was derived from the Attitude-Social Influence-Self-Efficacy model (De Vries, Mudde, Dijkstra, & Willemsen, 1998) and incorporates elements from ecological, sociocognitive, self-regulation, and communication models. The I-Change model aims to explain motivational and behavioral change as follows: Behavior is determined by an individual's motivation or intention to carry out a certain behavior. Motivation is determined by attitudes, social influences, and self-efficacy. Attitude, social influence, and self-efficacy are determined by awareness factors (knowledge, cues to action, risk perceptions) and predisposing factors (behavioral, psychological, biological, and social cultural).

Previous research using the I-Change model revealed that boys had a more supportive attitude toward forced sex than girls (De Vries et al., 2014). De Vries et al. (2014) reported that boys' social influence was more approving toward forced sex than the social influence of girls. Regarding self-efficacy, De Vries et al. (2014) found that boys and girls differed in overall self-efficacy not to force someone into having sex. Boys had lowest self-efficacy not to force sex when they were drunk, and girls, when they want to show that they are the "boss." In the study by De Vries et al. (2014), gender differences were also found for intention and action plans due to girls being more likely to report intending to solve conflicts in their relationships by nonviolent means. However, the study by De Vries et al. (2014) examined adolescents' beliefs about "forced sex," a broader concept that includes beliefs about perpetrating forced sex toward a partner or a nonpartner. Sexual IPV only includes forced sex toward an intimate partner.

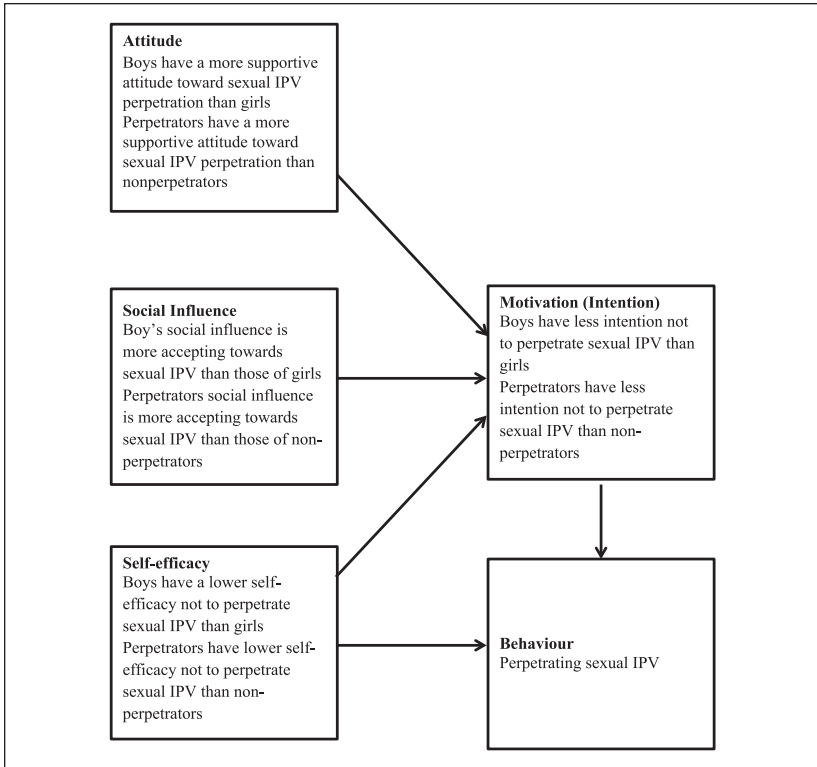
Mueller, Jouriles, McDonald, and Rosenfield (2013) examined the attitudinal beliefs about acceptability of physical and sexual IPV of boys who have perpetrated physical or sexual IPV. Adolescent males, who have perpetrated

physical or sexual IPV, had more accepting beliefs about IPV perpetration. Furthermore, individuals who have perpetrated sexual IPV were more likely to have peers who approve forced sex. For boys, a lower self-efficacy to resist peer pressure (e.g., when peers are having sex) increased the odds of sexual IPV perpetration (Shamu et al., 2016). Therefore, a better understanding of adolescents' beliefs about perpetrating IPV may help intervention developers plan the content of interventions aiming to prevent IPV.

To our knowledge, this is the first article that will investigate attitude, social influence, self-efficacy beliefs, and intentions toward perpetrating sexual IPV from the perspective of both males and females who have perpetrated sexual IPV. Knowing these beliefs may help interventionists and policy makers and lawmakers develop appropriate educational and legislative campaigns to prevent sexual IPV.

This article focuses on the motivational factors that affect intention and thus behavior. According to this part of the I-Change model, adolescents' beliefs about IPV perpetration may lead to intention to perpetrate IPV and to the perpetration behavior itself. The first aim of this study was to compare attitude, social influence, self-efficacy beliefs, and intentions toward perpetrating sexual IPV between boys and girls using the I-Change model. The second aim was to assess how these beliefs about pressuring a partner to have sex and intention differed between sexual IPV perpetrators and non-perpetrators by gender. The third aim was to examine how suitable the I-Change model is to explain the variance in sexual IPV perpetration for boys and girls.

Figure 1 summarizes the hypotheses of this study, generated from earlier research and our theoretical model. We hypothesized that boys, due to more social acceptance for IPV among males in South Africa, will have a more supportive attitude toward sexual IPV, a social network more likely to think that putting pressure on a boyfriend or girlfriend to have sex is okay, a lower self-efficacy to refrain from pressurizing a boyfriend or girlfriend to have sex, and less intention not to perpetrate sexual IPV than girls (Hypothesis 1). We further hypothesized that both boys and girls who had perpetrated sexual IPV will have a more supportive attitude toward sexual IPV perpetration, a social network more likely to think that putting pressure on a boyfriend or girlfriend to have sex is okay, a lower self-efficacy to refrain from pressurizing a boyfriend or girlfriend to have sex, and a reduced intention not to perpetrate sexual IPV than nonperpetrators (Hypothesis 2). Finally, as beliefs about IPV develop within a broader ecological context, we furthermore explored the relations of these beliefs with contextual factors, such as age, socioeconomic status (SES), previous sexual encounters, and relationships via correlational and regression analysis.



**Figure 1.** Hypothesis applied to the Integrated Change model.

Note. IPV = intimate partner violence.

## Method

### *Design and Procedure*

This was a quantitative study with a cross-sectional study design, performing secondary data analyses on the baseline data from the PREPARE study, a cluster-randomized controlled trial. The questionnaire was a paper-and-pencil questionnaire, resembling a “teen magazine.” Each question was provided in the three high-frequency languages of the Western Cape Province in South Africa (Afrikaans, English, and Xhosa). The baseline study was implemented during school hours in February and March 2013 and the completion of the questionnaire took approximately 45 min. Privacy was ensured in the classroom setting and questionnaires were filled under “exam conditions.” It was

assured to the participants that the results will not be linked to their names, so no referrals were possible to make based on their responses. At the end of the questionnaire administration, the researchers were available for the participants who wanted to approach them or ask for help in any issues, and in these cases, referrals were carried out. After the completion of the baseline study, eligible students were invited to the PREPARE afterschool intervention, which aimed to prevent violence in relationships and prevent HIV/AIDS. Further information on the procedure can be found elsewhere in Mathews et al. (2016).

### *Participants*

The inclusion criterion for the participants was being a Grade 8 student in a public school in Western Cape, South Africa. The PREPARE project in Western Cape calculated the sample size to be 40 schools with at least 75 students per school (Mathews et al., 2016). The sampling frame was a database of 359 public high schools in the Western Cape Province. Of the 359 schools in the Western Cape, schools that were situated in districts more than a 3-hr drive from Cape Town (67), schools that were already participating in some HIV prevention trial, and schools with a Grade 12 pass rate below 40% (1) or more than 97% (33) were excluded. The pass rate refers to the final school-leaving examinations, referred to as “matriculation” or Grade 12 school-leaving certificate. Forty-two public high schools in Western Cape were randomly selected to participate in the research, and were randomly allocated to an intervention or a control group. In these schools, 6,244 students were invited to participate in the PREPARE trial. The inclusion criteria for the participants of the participating schools were that they had returned a parental/caregiver consent form and given a consent themselves to participate. Of the invited students, 3,251 (55%) provided the appropriate consent to participate in the PREPARE trial and participated in the survey. Only participants who answered ever having had a girlfriend or boyfriend were included in the analyses ( $N = 2,199$ ).

### *Measures*

The PREPARE baseline questionnaire contained 258 multiple-choice questions. The questions related to sexual risk behavior were developed and evaluated in a previous HIV prevention randomized controlled trial (Mükoma et al., 2009). Measures about the exposure to sexual IPV were adapted from the WHO survey (García-Moreno, Jansen, Ellsberg, Heise, & Watts, 2005). Formative qualitative research among adolescents in six schools and an instrument used in a previous study were used to identify beliefs that served as barriers and facilitators of safe sexual behavior (Mathews et al., 2016).

**Table 1.** Gender Differences in Sociodemographics and Behavioral Factors.

	Total (n = 2,199)	Boys (n = 931)	Girls (n = 1,268)
Gender	100% (2,199)	42.3% (931)	57.7% (1,268)
Age group			
12-13 years	50.2% (1,107)	44.0% (407)	55.3% (691)
14-15 years	44.1% (972)	47.5% (440)	41.3% (516)
16-23 years	5.8% (127)	8.5% (79)	3.4% (43)
Orphan status			
Maternal orphan	4.7% (104)	2.9% (27)***	6.1% (77)
Paternal orphan	12.7% (267)	12.3% (110)	12.8% (157)
SES, <sup>a</sup> M (SD)	6.10 (1.59)	6.08 (1.59)	6.13 (1.58)
Sexual behavior			
Ever had vaginal sex	17.7% (325)	30.7% (229)***	8.8% (96)
Ever had anal sex	11.6% (217)	20.5% (166)***	4.8% (51)
Ever had oral sex	11.6% (196)	19.4% (143)***	5.6% (53)
Sexual IPV victimization	9.5% (173)	13.6% (105)***	6.4% (68)
Sexual IPV perpetration	6.6% (121)	11.3% (87)***	3.2% (34)

Note. SES = socioeconomic status; IPV = intimate partner violence.

<sup>a</sup>Scale from “having none of the household items” (0) to “having all of household items” (8).

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

*Sociodemographic factors* included age, gender (1 = male, 2 = female), and orphan status (maternal orphan, paternal orphan, 1 = yes, 0 = no; see Tables 1 and 2). SES was measured by asking eight questions about having a certain item at home (electricity, tap water, toilet, fridge, landline, mobile telephone, television, car). A score was calculated by summing the individual SES factors (0 = no, 1 = yes), resulting to an overall SES score, ranging from “having none of the items” (0) to “having all the items” (8). Self-declared ethnicity was determined by asking the following question: How do you identify yourself (1 = Black; 2 = White; 3 = Colored; 4 = Other). In South Africa, colored refers to a mixed-ethnic origin. Ethnicity was assessed to confirm that the included participants were representative of the young adolescent population of Western Cape, South Africa.

Behavioral factors contained questions about ever having a boyfriend or girlfriend (1 = yes, 0 = no), sexual behavior, sexual IPV perpetration, and sexual IPV victimization. Sexual behavior was determined by asking three questions: Have you ever had vaginal sex? (1 = yes, 0 = no); have you ever had anal sex? (1 = yes, 0 = no); and have you ever had oral sex? (1 = yes, 0 = no). Sexual IPV perpetration was measured by asking the following question: In the past 6 months, how often have you forced a boyfriend or girlfriend to have sex with you? (1 = at least once, 0 = never). Sexual IPV victimization



**Table 2.** Differences Between Sexual IPV Perpetrators and Nonperpetrators in Sociodemographics and Behavioral Factors.

	Boy Perpetrators (n = 87)	Boy Nonperpetrators (n = 844)	Girl Perpetrators (n = 34)	Girl Nonperpetrators (n = 1,234)
Gender	9.34% (87)	90.66% (844)	2.68% (34)	97.32% (1,234)
Age group				
12-13 years	22.4% (19)***	46.0% (313)	30.3% (10)*	55.7% (568)
14-15 years	63.5% (54)***	47.0% (320)	66.7% (22)*	40.9% (417)
16-23 years	14.1% (12)***	7.0% (48)	3.0% (1)*	3.3% (34)
Orphan status				
Maternal orphan	4.7% (4)	3.1% (21)	0.0% (0)	6.2% (64)
Paternal orphan	14.3% (12)	11.5% (76)	14.7% (5)	12.8% (127)
SES, <sup>a</sup> M (SD)	5.47 (1.99)**	6.13 (1.54)	5.56 (1.89)	6.17 (1.56)
Sexual behavior				
Ever had vaginal sex	56.9% (37)***	28.9% (161)	23.1% (6)*	8.8% (79)
Ever had anal sex	44.2% (34)***	18.5% (110)	12.9% (4)*	4.5% (39)
Ever had oral sex	42.6% (29)***	17.6% (96)	17.9% (5)**	4.7% (36)
Sexual IPV victimization	65.4% (51)***	6.1% (40)	76.7% (23)***	4.0% (39)

Note. IPV = intimate partner violence; SES = socioeconomic status.  
<sup>a</sup>Scale from "having none of the household items" (0) to "having all of the household items" (8).  
 \*p < .05. \*\*p < .01. \*\*\*p < .001.

was measured by asking the following question: In the past 6 months, how often has a boyfriend or girlfriend forced you to have sex with them? (1 = at least once, 0 = never).

*Beliefs about pressuring a boyfriend or girlfriend to have sex* were based on the motivational factors of the I-Change model (attitude, social influence, and self-efficacy) and intention (see Table 3, for a description of the items). Attitude was measured with beliefs that perpetrating sexual IPV will improve our relationship and make me seem successful. Social influence included the perceived permissiveness of parents/caregivers, most of friends, most men in the family, most women in the family, and boyfriend or girlfriend. The questions about attitudes and social influences were measured on a 5-point Likert-type scale, from *strongly disagree* (1) to *strongly agree* (5) with two questions about attitude ( $\alpha = .79$ , boys:  $\alpha = .77$ , girls:  $\alpha = .81$ ), and five questions about social influence (perceived social norm;  $\alpha = .93$ , boys:  $\alpha = .91$ , girls:  $\alpha = .94$ ). Self-efficacy was measured with three questions about not pressurizing a boyfriend or girlfriend not to have sex ( $\alpha = .82$ , boys:  $\alpha = .76$ , girls:  $\alpha = .85$ ) and was assessed with a 5-point Likert-type-scale from *very easy for me* (1) to *very difficult for me* (5). One question was used to assess intention not to perpetrate IPV and the possible answers varied from *definitely yes* (1) to *definitely no* (5).

**Table 3.** Gender Differences in Attitude, Social Influence, Self-Efficacy Beliefs, and Intention (Correcting for Age, SES, and Perpetrator Status).

	Boys (931)		Girls (1,268)		F
	M	SD	M	SD	
<b>Attitude<sup>a</sup></b>					
If I put pressure on my boyfriend or girlfriend to have sex . . .					
It will improve our relationship	2.19	1.26	1.94	1.13	*F(1, 1763) = 6.62
It will make me seem successful	2.15	1.24	1.81	1.03	***F(1, 1763) = 22.46
<b>Social influence<sup>a</sup></b>					
. . . Think it is okay for me to put pressure on my boyfriend or girlfriend to have sex					
My parents/caregivers	2.04	1.24	1.77	1.02	***F(1, 1735) = 8.79
Most of my friends	2.17	1.24	1.83	1.05	***F(1, 1735) = 24.33
Most men in my family	2.07	1.22	1.74	0.95	***F(1, 1735) = 25.41
Most women in my family	2.01	1.15	1.74	0.98	***F(1, 1735) = 14.42
My boyfriend or girlfriend	2.14	1.22	1.81	1.02	***F(1, 1735) = 20.69
<b>Self-efficacy<sup>b</sup></b>					
Not pressurizing my boyfriend or girlfriend to have sex . . .					
When he or she does not want to have sex	2.83	1.49	2.40	1.36	***F(1, 1720) = 24.25
When my friends have sex	2.86	1.40	2.56	1.39	**F(1, 1720) = 10.87
When we have been together for a long time	2.85	1.40	2.56	1.33	***F(1, 1720) = 13.39
<b>Intention<sup>c</sup></b>					
During the next 6 months I plan not to pressurize my boyfriend or girlfriend when he or she does not want to have sex	2.17	1.49	2.04	1.43	F(1, 1572) = 2.59

Note. SES = socioeconomic status.

<sup>a</sup>Scale from *strongly disagree* (1) to *strongly agree* (5).

<sup>b</sup>Scale from *very easy for me* (1) to *very difficult for me* (5).

<sup>c</sup>Scale from *definitely yes* (1) to *definitely no* (5).

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Data Analysis

Analyses were done with IBM SPSS statistics 23. Descriptive analyses and chi-square tests were conducted to describe the study population and compare frequencies of sociodemographic factors and behavioral factors between boys and girls, and between perpetrators and nonperpetrators. The comparison of perpetrators and nonperpetrators was done separately for boys and girls to find out the associated factors of IPV perpetration by gender. Multivariate ANOVA with age, SES, and perpetrator status as covariates was used to compare differences in attitude, social influence, self-efficacy beliefs, and intention toward perpetrating sexual IPV between boys and girls. Multivariate ANOVA with age and SES as covariates was also used to compare the beliefs and intentions

between perpetrators and nonperpetrators. Multiple logistic regression analysis was conducted to see how well the concepts of the I-Change model explained perpetrating sexual IPV for boys and girls. Block wise analyses were used to test whether the influence of more distal factors were mediated by the preceding factors. Perpetration of sexual IPV was added as the dependent variable. The regressions consisted of three blocks, which were divided based on the I-Change model: Block 1 consisted of sociodemographics (age, orphan status, SES) and behavioral items (ever had a boyfriend or girlfriend, ever had vaginal sex, ever had anal sex, IPV victimization); Block 2 included the motivational concepts of the I-Change model (attitude, social influence, and self-efficacy); intention was added to the equation in Block 3. The Nagelkerke  $R^2$  was used to assess how well the I-Change model fits to explain the approximation of the amount of variance between perpetrators and nonperpetrators. Correlation analysis (Pearson's  $r$ ) was conducted to assess how observed variables of the multiple logistic regression correlated.

### *Ethics Approval*

The PREPARE study was approved by the Human Research Ethics Committee, Faculty of Health Sciences, University of Cape Town and by the Western Cape Education Department of Health 268/2010.

## **Results**

### *Study Sample*

The mean age of participants was 13.73 ( $SD = 1.04$ ) and 56.3% of the participants were females (1,268/2,199). The study sample comprised of 35.9% adolescents who identified their ethnicity as "Black," 4.6% "White," 58.5% "Colored," and 1% "Other." The mean number of household items on the SES scale was 6.10 ( $SD = 1.59$ ) out of the eight household items. The orphan status of the sample was, 4.7% were maternal orphans and 12.7% were paternal orphans. Of the study sample, 17.7% had engaged in vaginal sex, 11.6% had engaged in anal sex, and 11.6% had engaged in oral sex. The prevalence of sexual IPV victimization was 9.5% and sexual IPV perpetration was 6.6%.

### *Gender Differences in Sociodemographics and Behavioral Factors*

Table 1 shows that more boys had engaged in vaginal sex,  $\chi^2(1) = 144.63$ ,  $p < .001$ ; anal sex,  $\chi^2(1) = 109.77$ ,  $p < .001$ ; and oral sex,  $\chi^2(1) = 76.15$ ,

$p < .001$ , than girls. Boys reported higher rates both of sexual IPV victimization,  $\chi^2(1) = 26.43, p < .001$ , and perpetration,  $\chi^2(1) = 47.72, p < .001$ , compared with girls. Boys were older than girls,  $\chi^2(2) = 42.89, p < .001$ , namely more boys in the age groups of 14-15 and 16- to 23-year-olds than girls, whereas more girls were in the age group of 12- to 13-year-olds. Girls were more likely to report being a maternal orphan than boys,  $\chi^2(1) = 11.77, p = .001$ . SES did not differ between boys and girls.

### ***Differences Between Sexual IPV Perpetrators and Nonperpetrators in Sociodemographics and Behavioral Factors***

Table 2 shows that boys who had perpetrated IPV owned fewer assets on the SES scale, more had ever engaged more in vaginal sex,  $\chi^2(1) = 21.16, p < .001$ ; anal sex,  $\chi^2(1) = 26.58, p < .001$ ; and oral sex,  $\chi^2(1) = 23.43, p < .001$ , and were more likely to have been victims of sexual IPV,  $\chi^2(1) = 225.61, p < .001$ , than boys who were nonperpetrators. Boys who had perpetrated IPV were older than boys who had not,  $\chi^2(2) = 18.77, p < .001$ .

Regarding girls, Table 2 shows that, when comparing girls who had perpetrated sexual IPV with girls who have not, perpetrators were more likely to have ever engaged in vaginal sex,  $\chi^2(1) = 6.14, p = .013$ ; anal sex,  $\chi^2(1) = 4.58, p = .032$ ; and oral sex,  $\chi^2(1) = 9.69, p = .002$ , and were more likely to have been victims of sexual IPV,  $\chi^2(1) = 267.78, p < .001$ , than nonperpetrators. Perpetrators were older than nonperpetrators,  $\chi^2(2) = 8.85, p = .012$ .

### ***Gender Differences in Attitude, Social Influence, Self-Efficacy Beliefs, and Intention***

Table 3 shows the results of the multivariate ANOVA and indicates that boys reported a more supportive attitude toward sexual IPV perpetration than girls, Pillai's Trace  $V = .013, F(2, 1762) = 11.33, p < .001$ .

Pillai's Trace also showed that there was a significant gender difference in social influence,  $V = .019, F(5, 1731) = 6.59, p < .001$ . Boys perceived their social network to be more likely to think pressuring a boyfriend or girlfriend to have sex is okay than the social network of girls.

Significant gender differences in self-efficacy were also found,  $V = .015, F(3, 1718) = 8.66, p < .001$ . Boys had a lower self-efficacy to refrain from pressurizing a boyfriend or girlfriend to have sex than girls.

Intention not to perpetrate sexual IPV during the next 6 months did not differ between boys and girls,  $F(1, 1572) = 2.59, p = .11$ .

### *Differences in Attitude, Social Influence, Self-Efficacy Beliefs, and Intention Between Perpetrators and Nonperpetrators*

Table 4 shows the multivariate ANOVA between boys who had and who had not perpetrated sexual IPV, and between girls who had and had not perpetrated sexual IPV. Based on Pillai's Trace, there was a significant difference in attitudes between boys and girls who had and had not perpetrated sexual IPV—boys:  $V = .061$ ,  $F(2, 741) = 25.13$ ,  $p < .001$ ; girls:  $V = .009$ ,  $F(2, 1017) = 4.74$ ,  $p = .009$ . Sexual IPV perpetrators of both genders had a more supportive attitude toward perpetrating IPV than nonperpetrators.

Boys who had perpetrated sexual IPV perceived their social network to be more likely to think it is okay to put pressure on a boyfriend or girlfriend to have sex than the social network of nonperpetrating boys,  $V = .081$ ,  $F(5, 719) = 12.67$ ,  $p < .001$ . Similar results were found for the social influence among girls with perpetrators perceiving their social network to be more likely to think that putting pressure on a boyfriend or girlfriend is okay than the social network of nonperpetrators,  $V = .017$ ,  $F(5, 1005) = 3.41$ ,  $p = .005$ .

Refraining from pressurizing a boyfriend or girlfriend to have sex was perceived more difficult for perpetrators than nonperpetrators. Both boys and girls who had perpetrated sexual IPV had a lower self-efficacy to refrain from pressurizing a boyfriend or girlfriend to have sex than nonperpetrators—boys:  $V = .023$ ,  $F(3, 727) = 5.69$ ,  $p = .001$ ; girls:  $V = .020$ ,  $F(3, 986) = 6.67$ ,  $p < .001$ .

For both boys and girls, intention did not differ between sexual IPV perpetrators and nonperpetrators—boys:  $F(1, 650) = 0.30$ ,  $p = .58$ ; girls:  $F(1, 919) = 1.59$ ,  $p = .21$ .

### *Correlation Analysis*

Table 5 shows results of the bivariate correlation between observed variables of the multiple logistic regression for boys and girls.

Pearson's correlation showed that, for both boys and girls, IPV perpetration was positively correlated with higher age, ever having had vaginal sex, ever having had anal sex, having been an IPV victim, more positive attitude, social influence, and self-efficacy and negatively correlated with SES. However, these variables had a weak relationship with IPV perpetration, except IPV victimization had a moderate relationship with IPV perpetration.

### *Multiple Logistic Regression Analysis*

Table 6 shows the results of the multiple logistic regression analysis to assess "how well the model explains the amount of variance." For boys, the

**Table 4.** Differences in Attitude, Social Influence, Self-Efficacy Beliefs, and Intention Between Perpetrators and Nonperpetrators (Correcting for Age and SES).

	Boy Perpetrators (87)		Boy Nonperpetrators (844)		Girl Perpetrators (34)		Girl Nonperpetrators (1,234)		F
	M	SD	M	SD	M	SD	M	SD	
<b>Attitude<sup>a</sup></b>									
If I put pressure on my boyfriend or girlfriend to have sex . . .									
It will improve our relationship	3.08	1.29	2.08	1.21	2.59	1.16	1.92	1.12	**F(1, 1018) = 9.33
It will make me seem successful	2.98	1.36	2.04	1.19	2.25	1.19	1.79	1.02	*F(1, 1018) = 5.32
<b>Social influence<sup>b</sup></b>									
. . . Think it is okay for me to put pressure on my boyfriend or girlfriend to have sex									
My parents/caregivers	3.09	1.54	1.91	1.14	2.25	1.27	1.76	1.01	*F(1, 1009) = 5.84
Most of my friends	2.72	1.40	2.11	1.20	2.41	1.29	1.81	1.03	**F(1, 1009) = 9.05
Most men in my family	2.86	1.40	1.98	1.16	2.13	1.13	1.72	0.94	*F(1, 1009) = 4.63
Most women in my family	2.71	1.42	1.93	1.09	2.25	1.11	1.73	0.97	**F(1, 1009) = 7.76
My boyfriend or girlfriend	2.89	1.43	2.05	1.16	2.53	1.41	1.79	1.00	***F(1, 1009) = 15.06
<b>Self-efficacy<sup>c</sup></b>									
Not pressurizing my boyfriend or girlfriend to have sex . . .									
When he or she does not want to have sex	3.45	1.38	2.75	1.48	3.52	1.48	2.37	1.34	***F(1, 988) = 19.96
When my friends have sex	3.44	1.28	2.78	1.40	3.30	1.45	2.53	1.38	**F(1, 988) = 8.44
When we have been together for a long time	3.25	1.43	2.81	1.39	3.15	1.44	2.54	1.32	*F(1, 988) = 5.66
<b>Intention<sup>d</sup></b>									
During the next 6 months I plan not to pressurize my boyfriend or girlfriend when he or she does not want to have sex	2.11	1.43	2.18	1.49	2.38	1.47	2.03	1.43	F(1, 919) = 1.59

Note. SES = socioeconomic status.

<sup>a</sup>Scale from strongly disagree (1) to strongly agree (5).

<sup>b</sup>Scale from very easy for me (1) to very difficult for me (5).

<sup>c</sup>Scale from definitely yes (1) to definitely no (5).

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 5. Bivariate Correlation Between Observed Variables.**

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. IPV perpetration		.16***	.028	.01	-.13***	.18***	.20***	-.012	.55***	.27***	.27***	.17***	-.007
2. Age	.078*		.096**	.094**	-.26***	.22***	.11**	-.038	.14***	.18***	.17***	.11**	.037
3. Maternal orphan	.01	.17***		.083*	-.09**	.01*	-.019	.025	-.03	.029	.070*	.039	.028
4. Paternal orphan	.01	.12***	.17***		-.10**	-.048	.043	-.029	.006	-.003	.062	.022	-.025
5. SES	-.068*	-.20***	-.045	-.12***		-.17***	-.14***	-.026	-.11**	-.13***	-.13***	-.09**	-.033
6. Ever had vaginal sex	.082*	.14***	.041	.019	-.073*		.41***	.054	.17***	.16***	-.02***	.14***	.048
7. Ever had anal sex	.072*	.083**	.034	.066*	-.11***	.47***		-.001	.25***	.17***	.18***	.20***	.015
8. Ever had oral sex	.031	.035	-.025	-.044	-.051	.015	-.047		-.013	.005	-.006	.042	-.038
9. IPV victimization	.51***	.08*	-.02	.04	-.019	.14***	.21***	-.016		.28***	.29***	.22***	.007
10. Attitude	.11***	.12***	-.034	.008	-.081**	.15***	.18***	.029	.12***		.73***	.32***	.052
11. Social influence	.11***	.13***	-.030	.005	-.039	.13***	.15***	.056	.12***	.70***		.36***	.61
12. Self-efficacy	.13***	.10**	-.009	-.024	-.13***	.071*	.12***	.019	.088**	.31***	.33***		-.019
13. Intention	.049	.038	-.035	-.055	-.006	.064*	.056	-.040	.013	.092**	.13***	.16***	

Note. Values above the diagonal pertain to boys and below the diagonal pertain to girls. IPV = intimate partner violence; SES = socioeconomic status. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 6.** Multiple Logistic Regression Analysis Showing Factors Associated With Perpetrating Sexual IPV.

	Boys			Girls		
	OR	95% CI	R <sup>2</sup>	OR	95% CI	R <sup>2</sup>
Block 1			.43			.37
Age	1.77	[0.83, 3.80]		1.13	[0.36, 3.61]	
Maternal orphan	0.66	[0.086, 5.03]		—	.000	
Paternal orphan	2.79	[0.59, 13.20]		—	.000	
SES	0.99	[0.73, 1.34]		0.78	[0.55, 1.1]	
Ever had vaginal sex	0.89	[0.32, 2.50]		0.84	[0.12, 5.77]	
Ever had anal sex	0.27*	[0.092, 0.81]		2.1	[0.17, 25.96]	
Ever had oral sex	1.002	[0.34, 3.00]		0.22	[0.034, 1.37]	
IPV victimization	0.028***	[0.01, 0.078]		0.026***	[0.0007, 0.94]	
Block 2			.46			.45
Age	1.70	[0.77, 3.73]		0.81	[0.22, 2.96]	
Maternal orphan	0.44	[0.062, 3.16]		—	.000	
Paternal orphan	2.54	[0.52, 12.53]		—	.000	
SES	1.1	[0.79, 1.52]		0.72	[0.49, 1.04]	
Ever had vaginal sex	0.99	[0.33, 2.94]		0.71	[0.11, 4.70]	
Ever had anal sex	0.26*	[0.085, 0.81]		4.63	[0.25, 86.79]	
Ever had oral sex	1.04	[0.33, 3.30]		0.21	[0.026, 1.69]	
IPV victimization	0.028***	[0.01, 0.084]		0.019***	[0.0004, 0.085]	
Attitude	1.84*	[1.04, 3.26]		0.51	[0.20, 1.29]	
Social Influence	0.96	[0.54, 1.72]		4.49**	[1.59, 12.65]	
Self-efficacy	0.80	[0.50, 1.28]		1.13	[0.63, 2.02]	

(continued)



**Table 6. (continued)**

	Boys			Girls		
	OR	95% CI	R <sup>2</sup>	OR	95% CI	R <sup>2</sup>
Block 3			.46			.50
Age	1.70	[0.77, 3.74]		0.81	[0.21, 3.05]	
Maternal orphan	0.44	[0.062, 3.15]		—	.000	
Paternal orphan	2.59	[0.52, 12.92]		—	.000	
SES	1.1	[0.79, 1.53]		0.63*	[0.41, 0.95]	
Ever had vaginal sex	0.99	[0.33, 2.95]		0.49	[.074, 3.28]	
Ever had anal sex	0.26*	[0.084, 0.81]		7.91	[0.41, 152.51]	
Ever had oral sex	1.04	[0.33, 3.29]		0.14	[0.016, 1.15]	
IPV victimization	0.028***	[0.01, 0.085]		0.012***	[0.002, 0.069]	
Attitude	1.84*	[1.04, 3.26]		0.37	[0.12, 1.09]	
Social influence	1.96	[0.54, 1.72]		5.90**	[1.75, 19.90]	
Self-efficacy	0.80	[0.50, 1.28]		1.00	[0.53, 1.91]	
Intention	0.95	[0.68, 1.33]		1.86*	[1.15, 3.01]	

Note. Orphan status (maternal orphan and paternal orphan) was not included in the analysis for girls, because of problems with convergence (SE estimates were too large in the analysis). IPV = intimate partner violence; OR = odds ratio; CI = confidence interval; SES = socioeconomic status. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

sociodemographic and behavioral factors (Block 1) explained 43% of the variance between perpetrators and nonperpetrators. When adding attitude, social influence, and self-efficacy (Block 2), the model explained 46% of the difference between perpetrators and nonperpetrators. Adding intention (Block 3) did not result in changes. Factors that had unique associations with boys' IPV perpetration were ever having had anal sex, attitude and IPV victimization.

For girls, sociodemographics and behavioral factors (Block 1) explained 37% of the variance between perpetrators and nonperpetrators. Once attitude, social influence, and self-efficacy (Block 2) were added, the model explained 45% of the variance between perpetrators and nonperpetrators. For girls, adding intention (Block 3), the amount of variance explained by the model was 50. Factors with unique associations with sexual IPV among girls were IPV victimization, social influence, SES, and intention.

## **Discussion**

This study described and compared attitude, social influence, self-efficacy beliefs, and intentions toward perpetrating sexual IPV between young adolescent girls and boys, and perpetrators and nonperpetrators in the Western Cape Province of South Africa using the I-Change model.

The results of this study showed that there were gender differences in the attitude, social influence, and self-efficacy beliefs concerning sexual IPV perpetration, thus supporting the first hypothesis to a large extent. Boys' attitudes were more supportive of sexual IPV perpetration, and boys perceived their social network to be more likely to think pressurizing a boyfriend or girlfriend to have sex is okay, and boys had a lower self-efficacy to refrain from pressurizing a boyfriend or girlfriend to have sex than girls. Even though gender differences were found in attitude, social influence, and self-efficacy, the general opinion of boys and girls was in favor of rejection of sexual IPV perpetration. De Vries et al. (2014) found similar results in the belief structure of forced sex among adolescents in KwaZulu-Natal, another province of South Africa with a different ethnic, SES, and language profile. A more supportive attitude toward perpetrating sexual IPV and social network being more okay with putting pressure to have sex on a boyfriend or girlfriend among boys may be explained by societal norms supporting gender power inequity and ideals of masculinity associated with violence and control (Jewkes & Morrell, 2010; Petersen, Bhana, & McKay, 2005; Russell et al., 2014; Shamu et al., 2016).

We did, however, not find differences for intention not to perpetrate IPV between boys and girls. Both boys and girls seemed to be more likely not to

intend perpetrating IPV in the upcoming 6 months. De Vries et al. (2014) found an overall difference in intention and action plans concerning forced sex between boys and girls in KwaZulu-Natal. The difference was a result of girls being more likely to intend to solve future conflicts with their boyfriend or girlfriend by nonviolent ways. However, similar to our study, their post hoc comparisons showed that intention not to force a partner to have sex did not differ between males and females. Reporting bias may have led to intentions not differing between groups, because questions about performing IPV in the future can be prone to social-desirable answers leading both boys and girls to be unwilling to report intentions to perpetrate IPV.

The second hypothesis was that both boys and girls who had perpetrated sexual IPV had a more supportive attitude toward sexual IPV perpetration, perceived their social network to be more likely to think that putting pressure on boyfriend or girlfriend to have sex is okay, a lower self-efficacy to refrain from pressurizing boyfriend or girlfriend to have sex, and less intention not to perpetrate sexual IPV than nonperpetrators. Our data suggest that both female and male sexual IPV perpetrators had a more supportive attitude toward sexual IPV perpetration than nonperpetrators. Intention did not differ between perpetrators and nonperpetrators. Mueller et al. (2013) found that physical and sexual IPV perpetration was associated with acceptance of violence among African American adolescents aged 14 to 17. It is possible that perpetrators of IPV might change their beliefs about perpetrating IPV to help them justify perpetration (Mueller et al., 2013). Sexual IPV perpetrators may want to accept their own behavior, and therefore have more positive attitude toward perpetrating sexual IPV. Also, perpetrators of IPV may find perpetration of IPV more acceptable if the outcome of the perpetration has been positive (e.g., desired change in behavior of girlfriend or boyfriend; Mueller et al., 2013).

In our study, an integrated model was used because behavior, such as IPV perpetration, requires an ecological approach, which pays attention to sociodemographic and sociocognitive factors. The concepts of the I-Change model (sociodemographic, behavioral factors, attitude, social influence, self-efficacy, intention) fit to explain perpetration behavior for boys 46% and 50% for girls. The multiple logistic regression revealed that IPV victimization, attitude, and previous sexual experiences played an important role in IPV perpetration for boys, and for girls, social influences seem to be important. The regression analysis showed that only a few factors were associated with IPV perpetration. This may be partly due to multicollinearity, given that the correlation analysis showed that many of the observed variables correlated with each other. This finding supports the value of multiple regression analyses in the study of complex behavioral phenomena such as IPV. We believe that the correlation and regression analysis resulted in valuable information for intervention developers, given that the I-Change model fit to explain a

large part of the perpetration behavior among this study population. We did not investigate the awareness factors (knowledge and risk perception), which are possible moderators of perpetrating IPV according to the I-Change model. Other possible moderators, such as substance use, should also be addressed in interventions, because they have shown to be also predictors of perpetrating sexual IPV (Russell et al., 2014). In addition, given the fact that IPV attitudes are also part of the larger social context and that the perceived social norm appears to be more accepting toward IPV, we propose to include more contextual factors for future research that may also explain the higher acceptance of the social environment toward IPV among boys.

An alarming finding was that the majority of adolescents, who reported having engaged in vaginal or anal sex, also reported sexual IPV victimization and perpetration. This suggests that there is an overlap with IPV perpetration and victimization. Over half of the boys (65.4%) and girls (76.7%) who had perpetrated sexual IPV have also been victims of sexual IPV. The multiple logistic regression analysis showed that for both boys and girls, being a victim of sexual IPV was strongly associated with perpetrating sexual IPV and therefore suggest that prior sexual IPV victimization should be prevented to prevent future sexual IPV perpetration. A small number of studies have examined the overlap of IPV victimization and perpetration (Mason-Jones et al., 2016; Wubs et al., 2009). Prevention of IPV perpetration is important, because IPV perpetration and victimization are positively correlated with each other. Furthermore, longitudinal research on this area would help us understand the overlap of IPV perpetration and victimization.

More in-depth research is needed to study IPV perpetration and victimization among males, because males have more frequently been IPV victimized and perpetrated sexual IPV than girls. Similar results were found in the study by Wubs et al. (2009): Boys had been more often victims of sexual IPV and perpetrated forced sex than girls in Cape Town. It would be helpful to find out the characteristics of the intimate partner. We do not know why males have perpetrated sexual IPV more frequently and been more sexual IPV victimized than girls. Therefore, it would be relevant to know whether IPV occurs with an older or a younger partner and in a same-sex or an opposite-sex relationship. Also, the link between anal sex and sexual IPV perpetration needs to be investigated in future research.

### ***Strengths and Limitations***

The strength of this study was the large sample size ( $N = 2,199$ ) and results can be generalized to the adolescent population in Western Cape, South Africa. The study gives a clear explanation of adolescents' beliefs about IPV perpetration, which can be used to plan new sexual IPV prevention

campaigns and interventions for adolescents in South Africa. Due to the cross-sectional design, no causality conclusion can be drawn. Longitudinal research regarding attitude, social influence, self-efficacy beliefs, and intention would provide valuable information in knowing which of these factors predict IPV perpetration. Furthermore, the study relied on a self-report measure and the topic, sexual IPV perpetration, is a sensitive topic, which may lead to underreporting (De Vries et al., 2014; Mason-Jones et al., 2016). The questionnaire was answered anonymously to deal with the possible issue of underreporting. There is growing evidence that research regarding sensitive topics has also benefits for the participants (e.g., relief, sharing issues, and being listened to; McClinton Appollis, Lund, de Vries, & Mathews, 2015).

## Conclusion

The rates of sexual IPV perpetration and victimization are alarmingly high among young adolescents in South Africa. Our data suggest that interventions aiming to prevent sexual IPV perpetration should address attitudes toward sexual IPV perpetration and social influence regarding IPV perpetration. More attention needs to be given to IPV perpetration among boys, given that boys have more frequently perpetrated IPV than girls. As IPV victimization is significantly linked to perpetration, prevention of IPV perpetration is of utmost importance.

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