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Child maltreatment and sexual risk behavior: Maltreatment types and gender differences

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Abstract

Objective—To compare sexual risk behaviors in maltreated male and female sexually-active adolescents to a comparison population and examine whether specific maltreatment experiences were associated with sexual risk behaviors and teen pregnancy.

Method—Data came from the fourth assessment (M=7.2 years after baseline) of an ongoing longitudinal study with case-control design. The sample was restricted to only the sexually active adolescents, leaving a sample of 251 (n=82 comparison; n= 169 maltreated) mean age = 18.49 years (SD=1.46). Maltreatment type was coded from case records and sexual behaviors were assessed via computerized questionnaire.

Results—Maltreated youth were significantly younger at first consensual intercourse than comparison youth and males were younger than females. Maltreated males reported significantly higher number of lifetime sexual partners than maltreated females. Neglected, sexually abused, and physically abused youth were more likely to have had a one night stand than comparison youth. Sexually abused females were at higher risk of having sex under the influence than other maltreated females. Neglected females were more likely to have ever been pregnant than females with other maltreatment types or comparison females. A higher number of maltreatment victimizations predicted a younger age at 1st pregnancy involvement for both sexes.

Conclusion—Many maltreated youth continue to be at high risk for engaging in behaviors that may initiate a trajectory of problematic sexual behaviors. The findings highlight maltreated males and neglected females as vulnerable groups that should be targeted in prevention efforts to curtail sexual risk behaviors and prevent teenage pregnancy.

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Keywords

maltreatment; sexual risk behavior; teen pregnancy; gender differences

Across all racial and ethnic groups, births to females aged 14 to 19 have been steadily declining since 1991, and in 2010 the birth rate was 34.3 per 1000, a historic low in the United States [1]. Yet, the national percentage of high school youth who had 4 sexual partners increased slightly in 2013 (15.0%) compared to 2003 (14.4%) and fewer youth who were sexually active used condoms during their last sexual intercourse in 2013 (59.1%) than in 2003 (63%)[2, 3]. Thus, although teen pregnancy is not on the rise, adolescents are still having numerous unprotected sexual encounters which may lead to sexually transmitted infections (STI's). Maltreated adolescents in particular are at high risk for engaging in risky sexual behaviors. Nationally, of the youth aged 11-18 years old reported for maltreatment to child protective services (CPS), 40.5% of sexually active youth were 13 years old or younger at their sexual debut [4]. In California, 44.9% of all adolescent females giving birth in 2009 had been reported to CPS for maltreatment prior to conception [5] demonstrating that this is a particularly vulnerable population.

Most studies of child maltreatment and sexual risk behavior have focused on childhood sexual abuse [6]. Results from these studies show that males and females who experienced any kind of sexual abuse had significantly increased odds of pregnancy involvement and engagement in risky sexual behaviors than adolescents without sexual abuse [7, 8]. A meta-analysis of childhood sexual abuse in adolescent males (nine studies) found increased risk of pregnancy involvement, multiple partners, and unprotected intercourse for sexually abused versus non-sexually abused males. However, these studies lacked a standard definition of sexual abuse [9]. Many more studies have been conducted with females; a recent meta-analysis of childhood sexual abuse in females (21 studies) found that childhood sexual abuse increased the odds of a female experiencing teen pregnancy by 2.21 times [10]. There are also significant associations between childhood sexual abuse in women and sex trading, more sexual partners, and an earlier age of first intercourse [11, 12]. However this research is limited by the lack of a consistent definition of child sexual abuse, failure to investigate gender effects, and confounded associations between childhood sexual abuse experience and risky sexual behaviors [11].

Other types of maltreatment besides sexual abuse have also been shown to be related to sexual risk behaviors. In women, experiencing multiple types of childhood maltreatment was associated with having had sex without knowing a partner's history, younger age at first pregnancy, and younger age at first consensual intercourse [13]. Sexual abuse and neglect both increased the odds of a teen girl giving birth compared to girls who were not maltreated [14]. Little research has included males, although an exception is the Adverse Childhood Experiences (ACEs) Study. The ACEs study, which included seven ACEs (three childhood maltreatment experiences), found that men and women who had four or more ACEs compared to no ACEs were more likely to have 50 sexual intercourse partners as well as a history of a STI [15, 16]. The ACEs study looks at cumulative risk, thus the number of instances of adverse experiences, e.g. maltreatment, seems to be an important predictor of

sexual risk behavior. Unfortunately, there is a lack of studies directly comparing males and females in terms of maltreatment experiences.

The goals of the present study were: 1) to compare sexual risk behaviors between sexually-active maltreated youth versus comparison youth by gender and between genders; 2) determine if maltreatment type or number of maltreatment victimizations was associated with specific sexual risk behaviors by gender and between genders.

Research Design and Methods

Participants

Data were from the fourth assessment ($M=7.2$ years after baseline) of an ongoing longitudinal study (case-control design) examining the effects of maltreatment on adolescent development. The enrolled sample was 454 adolescents aged 9–13 years (241 males and 213 females; 303 maltreated and 151 comparison). Of the original sample, 77% completed the Time 4 assessment ($N=350$). However, for the current analyses the sample was restricted to only those who indicated they were sexually active (presently or in the past). Thus, the final sample was 251 participants (135 males, 116 females; 82 comparison and 169 maltreated). Participants not seen at Time 4 were more likely to be in the maltreatment group ($OR=2.45$, $p<.01$) and male ($OR=1.86$, $p<.01$).

Recruitment—The maltreatment group was recruited from active cases in the Children and Family Services (CFS) of a large west coast city. The inclusion criteria were: (1) a new substantiated referral to CFS in the preceding month for any type of maltreatment; (2) child age of 9-12 years (note some children turned 13 years old between when they were enrolled and interviewed); (3) child identified as Latino, African-American, or Caucasian (non-Latino); (4) child residing in one of 10 zip codes in a designated county at the time of referral to CFS. With the approval of CFS and the Institutional Review Board of the affiliated university, potential participants were contacted. Of the families referred by CFS, 77% agreed to participate.

The comparison group was recruited using school lists of children aged 9-12 years residing in the same 10 zip codes as the maltreated sample. Comparison caregivers were contacted the same way as the maltreated group. Comparison families were cross-checked through the CFS database to ensure they had no previous or ongoing experience with child welfare agencies. Approximately 50% of the comparison families contacted agreed to participate.

Procedures

Assessments were conducted at an urban research university. After assent and consent were obtained from the adolescent and caretaker, respectively, the adolescent was administered questionnaires and tasks during a four-hour protocol. Both the child and caretaker were paid for their participation according to the National Institutes of Health standard compensation rate for healthy volunteers.

Measures

Maltreatment Classification—Research assistants abstracted information from child welfare case records to classify the types of maltreatment experienced (see [reference withheld for blind review] for details of the record abstraction). Categories included neglect, emotional abuse, physical abuse, and sexual abuse. Definitions were derived from the Department of Children and Family Services [17]. Four separate maltreatment variables indicated the presence or absence of that particular type of maltreatment (not mutually exclusive). The maltreatment classification was determined at Time 1 after abstraction of the case files. The cumulative number of maltreatment victimizations was calculated using the information from all available case records. For each child welfare report, a child could have from 1-4 separate instances of reported maltreatment victimization (i.e. physical abuse, emotional abuse, sexual abuse or neglect).

Sexual Attitudes and Activities Questionnaire (SAAQ)—At Time 4 the adolescents were asked about their voluntary sexual activity (eliminating reports of potential sexual abuse), pregnancy history, and contraceptive use with computerized administration of the SAAQ [18]. One question asking if they ever had sexual intercourse was used to determine the sexually active youth. The following variables were obtained: (1) age at first consensual intercourse (in years), (2) number of lifetime sexual partners (coded: 0, 1, 2 or 3, 4 to 7, 7 to 10, more than 10), (3) ever been/gotten someone pregnant (yes/no), (4) frequency of contraceptive use (based on the distribution re-coded from 6 categories into: 0=never/hardly ever, 1=sometimes/about half the time/almost every time/every time), (5) number of pregnancies, and (6) age at 1st pregnancy (years), (7) ever had sexual intercourse without a condom (yes/no), (8) ever had a one night stand (yes/no), and (9) ever had sexual intercourse under the influence of drugs or alcohol (yes/no).

Covariates—Covariates were chosen based on evidence of associations with sexual risk behavior: age, ethnicity (minority/White), whether the adolescent had ever had out-of home placement (since enrollment in the study) and adolescent reported pubertal timing (using the Tanner staging system and standardizing within age/gender).

Data Analysis

All analyses were conducted using SPSS 21.0.

Model 1: Maltreatment vs. Comparison

Independent variables were added in a hierarchical procedure, first the main effect of maltreatment status was entered to determine if the sexual risk behavior differed as a function of being maltreated. Next, gender was added to examine overall gender differences and the maltreatment main effect after controlling for gender. Third, a maltreatment by gender interaction was added to test whether any of the outcomes differed for maltreated males versus comparison males, for maltreated females versus comparison females, or for maltreated males versus maltreated females. For continuous variables such as age at 1st intercourse and number of sexual partners, MANCOVA was used to determine mean differences between groups. For dichotomous variables (e.g. ever been/gotten someone

pregnant) logistic regression was used to compute whether being maltreated increased the risk for the outcome. For age at first pregnancy and number of pregnancies, only those who had been/gotten someone pregnant were included in the analyses. A zero-inflated Poisson regression model was used to examine the number of pregnancies whereas age at first pregnancy was examined using ANOVA.

Model 2: Maltreatment Type

The second set of analyses examined the main effects of maltreatment type (i.e. physical abuse, sexual abuse, emotional abuse, and neglect) on the nine sexual risk outcomes. First, the main effects of each maltreatment type were entered in separate models in order to circumvent the collinearity resulting from high rates of polyvictimization in this sample. Each maltreatment type was coded yes/no for the presence or absence of that particular type and contrasts were examined between a) maltreated with the targeted type and maltreated without that type and b) maltreated with the targeted type versus comparison youth. Next, gender was added to the model, then a maltreatment type by gender interaction was examined.

Model 3: Maltreatment Victimization

Lastly, in a third set of analyses we examined the main effects of total number of maltreatment victimizations on the sexual risk variables using hierarchical linear regression or logistic regression. The same model building process was employed as described previously (i.e. maltreatment victimizations, then gender, then victimizations by gender interaction). Covariates included in all models were: age (T1 age which was more proximal for age at 1st intercourse and T4 age for all other outcomes), ethnicity (minority/White), foster placement, and pubertal timing. For “ever been/gotten someone pregnant”, contraceptive use and number of lifetime sexual partners were included as covariates.

Results

Sample Demographics

At Time 4, the maltreated and comparison groups were similar in age (maltreated $M = 18.49$ years, $SD = 1.41$; comparison $M=18.48$, $SD=1.47$), gender composition, and proportion of ethnicities (see Table 1). More comparison youth were living with a biological parent at Time 4 than the maltreated youth (87% vs. 60%). Additionally, 22% of the comparison youth and 26% of the maltreated youth were not living with any caregiver at Time 4.

Maltreatment Classification

Within the current study sample there were 129 with classification of neglect, 86 with emotional abuse, 87 with physical abuse, and 35 with sexual abuse. The gender breakdown of maltreatment types is shown in Table 2. Additionally, 70% of the maltreated group experienced more than one type of maltreatment. For the cumulative number of maltreatment victimizations, the number ranged from 1-20 for males ($M=3.44$, $SD=4.10$) and 1-18 for females ($M=3.91$, $SD=4.23$).

Descriptive Statistics

The unadjusted means for continuous outcome variables and the number and percentages for dichotomous outcome variables can be found in Table 3.

Model 1: Maltreatment versus Comparison Group

For the age at first consensual intercourse there was a main effect of maltreatment $F(1, 221) = 11.40, p=.01$ and gender $F(1, 221) = 23.67, p=.01$. Maltreated youth were significantly younger ($M_{adj}=14.86, SE=.16$) than comparison youth ($M_{adj}=15.79, SE=.23$) at their sexual debut. Males ($M_{adj}=14.75, SE=.17$) reported younger age at first consensual intercourse than females ($M_{adj}=15.90, SE=.18$).

For the number of lifetime sexual partners, both maltreatment $F(1, 247) = 4.73, p=.03$ and gender had significant main effects $F(1, 247) = 49.05, p=.01$ after controlling for the other. Maltreated youth reported significantly more sexual partners ($M_{adj}=2.52, SE=.08$) than comparison youth ($M_{adj}=2.19, SE=.12$) and males reported more ($M_{adj}=2.83, SE=.09$) than females ($M_{adj}=1.88, SE=.10$). The interaction effect between maltreatment and gender was significant $F(1, 247) = 4.08, p=.04$, with maltreated males reporting significantly more lifetime sexual partners than maltreated females ($M_{adj}=3.09, SE=.11$ vs. $M_{adj}=1.95, SE=.11$), and comparison males reporting significantly more sexual partners than comparison females ($M_{adj}=2.45, SE=.16$ vs. $M_{adj}=2.05, SE=.20$). For all of the outcomes, maltreated and comparison males were not significantly different nor were maltreated versus comparison females.

Maltreated youth were 2.26 times more likely than comparison youth to report having a one night stand (95% CI=1.15-4.07, $p=.01$). Gender was also a significant predictor, with males more likely to report a one night stand than females (OR=2.91, 95% CI=1.66-5.12, $p=.01$).

There was a significant main effect of gender on ever been/gotten someone pregnant with females being 2.6 times more likely to report getting pregnant than males were to report having been/gotten someone pregnant. (95% CI=1.68-5.19, $p=.01$). Lastly, the group by gender interaction was significant ($p=.01$) and showed maltreated females were 8.18 times more likely to have been involved in a pregnancy than maltreated males, and maltreated females were 6.98 times more likely than comparison females.

For number of pregnancies, both maltreatment and gender were significant predictors (for those who reported ever being involved in a pregnancy). The incidence was higher for the maltreated group than the comparison group ($B=.32, p=.01$) and higher for males than females ($B=.44, p=.01$). The adjusted mean for the maltreated group ($M_{adj}=1.62, SE=.21$) was higher than that for the comparison group ($M_{adj}=1.18, SE=.18$) and for males ($M_{adj}=1.72, SE=.23$) than females ($M_{adj}=1.11, SE=.15$).

Model 2: Maltreatment Type

For ever being pregnant/gotten someone pregnant, there was a significant main effect of gender and an interaction between neglect and gender (OR=8.18, 95% CI=1.12-59.65, $p=.04$). Neglected females were found to be more likely to have ever been pregnant than

females with other maltreatment types (OR=6.29, 95% CI=1.70-23.20, $p=.01$) and females in the comparison group (OR=14.69, 95% CI=4.69-53.38, $p=.01$). There was also a significant interaction between physical abuse and gender (OR=4.60, 95% CI=.96-21.97, $p=.05$) for ever being pregnant/gotten someone pregnant. Females with physical abuse histories were more likely to have gotten pregnant than females the comparison group (OR=9.42, 95% CI=2.42-36.68, $p=.01$).

Neglected youth were at twice the odds of comparison youth for ever having a one night stand (OR=2.39, 95% CI=1.19-4.80, $p=.01$). Sexually abused youth were 3.82 times more likely to ever had a one night stand versus the comparison group (95% CI=1.29-11.27, $p=.02$) and 2.62 times more likely than the non-sexually abused maltreated youth (95% CI=1.07-6.39, $p=.03$). There was a significant main effect of physical abuse on ever having a one night stand with physically abused youth being at higher risk than comparison youth (OR=2.67, 95% CI=1.28-5.59, $p=.01$).

Sexually abused youth were more likely than other maltreated youth to report having sex under the influence after including gender in the model (OR=3.21, 95% CI=1.31-7.88, $p=.01$). There was also a significant sexual abuse by gender interaction (OR=6.88, 95% CI=1.07-44.06, $p=.04$) with sexually abused females at higher risk for having sex under the influence than non-sexually abused maltreated females (OR=6.00, 95% CI=1.93-18.67, $p=.01$). Additionally, non-sexually abused maltreated males were at higher risk than non-sexually abused maltreated females (OR=4.66, 95% CI=1.94-11.21, $p=.01$). Emotional abuse decreased the odds of ever having sex under the influence (OR=.47, 95% CI=.23-.97, $p=.04$) compared to the non-emotionally abused maltreated youth

There was a main effect of sexual abuse on contraception use with sexually abused youth more likely to use contraception than the non-sexually abused maltreated youth (OR=3.11, 95% CI=1.33-7.30, $p=.01$) and the comparison youth (OR=3.59, 95% CI=1.23-10.46, $p=.02$).

Model 3: Number of Maltreatment Victimization

A higher number of maltreatment victimization was related to younger age at first pregnancy ($\beta = -.24$, $p=.04$). A higher number of total maltreatment victimizations increased the odds of ever having been pregnant or gotten someone pregnant (OR=1.10, 95% CI=1.01-1.89, $p=.01$). There was a significant interaction effect between maltreatment victimizations and gender (OR=1.28, 95% CI=1.09-1.51, $p=.01$) indicating that females with more maltreatment victimizations were more likely to have been involved in a pregnancy than males with more maltreatment victimizations.

Discussion

Overall the results of the current study demonstrated that maltreated youth continue to be at high risk for engaging in behaviors that may initiate a trajectory of problematic sexual behaviors. Maltreated participants were younger than the comparison youth at their first sexual intercourse, they had a higher number of lifetime sexual partners, were more likely to have engaged in a one night stand, and had a higher number of pregnancies. These findings

foreshadow potential early markers of long-term sexual risk behaviors. Frequency of contraceptive use was not different between maltreated and comparison youth; both reported use of contraception “hardly-ever” or “never”. However, coupled with the fact that maltreated males are engaging with more sexual partners, the potential to contract and spread STI's is higher for this group [19]. There were several interaction effects that indicated the effect of maltreatment differed by gender. Maltreated males reported a higher number of lifetime sexual partners than maltreated females but were less likely to have ever gotten someone pregnant than maltreated females were to have been pregnant. The difference in pregnancy reports between genders may be biased in part because males are not always aware of paternity, limiting their ability to accurately report on whether they have been involved with a pregnancy. However, among those who reported at least one pregnancy, males reported a higher number of pregnancies than females. This may be an artifact of the earlier sexual debut of males as well as the possibility of impregnating multiple females. Maltreated females were nearly 7 times more likely to have ever been pregnant than comparison females. This is commensurate with other studies that find maltreatment to be a persistent risk factor for teen pregnancy after controlling for important confounds [14].

Similar to Noll and colleagues [14], we found that the presence of neglect increased the odds of ever being pregnant by 6 times compared to females that experienced other types of maltreatment but not neglect. This finding bolsters the growing evidence for the effects that neglect may have on sexual behaviors. Neglected adolescents may have less parental supervision and fewer responsible adults to help them problem-solve [20], which may include discussing sexual issues. Interestingly, sexual abuse, which is the most well-supported risk for teen pregnancy, was not related to pregnancy in the current study. This lack of replication may be due in large part to the small number of sexually abused youth in this study and to the unusual finding that sexually-abused females used contraception more often than other females in this study [21]. However, the results showed that sexually abused youth were nearly four times more likely than comparison youth to have ever engaged in a one night stand. Additionally, sexually abused females were six times more likely than other maltreated females to report having sex under the influence of drugs or alcohol and 4.6 times more likely than comparison females indicating that sexually abused youth are still extremely vulnerable.

Adolescents with a greater number of maltreatment victimizations were younger at their first pregnancy/paternity and females with a higher number of maltreatment victimizations were at higher risk for ever having been pregnant than similarly victimized maltreated males were for ever having gotten someone pregnant. The high number of multiple maltreatment experiences likely reflect a history of more maltreatment reports and/or more polyvictimization, which have been found to result in trauma symptomatology [22]. Our findings are similar to a study of youth in foster care which found that multiple trauma experiences increased the likelihood of risky sexual behaviors [23]. Sexual risk behavior prevention education may be less effective when youth have complex trauma as a result of childhood maltreatment, as complex trauma affects the youth's emotional responses, relationships, behavior, as well as health outcomes [24]. The unique effects of different maltreatment types and number of maltreatment victimizations has implications for the

developmental pathways to sexual risk behaviors and how prevention efforts should be designed.

There are limitations that should be considered. As mentioned previously, males may not have knowledge of all paternity, possibly reducing the number of pregnancies reported. Small cell sizes for sexual abuse limited the power to detect significant effects or to test interaction effects by maltreatment type and gender. Also, information about the youth's maltreatment history was obtained when the youth entered the study, and subsequent victimization was not available. No questions on sexual orientation were included in the questionnaire. Our results cannot be generalized beyond the urban, primarily minority youth that composed our sample. Sexual activity data were self-report creating possible reporting bias that may not accurately reflect actual behaviors. Lastly, there may have been unreported maltreatment that occurred in the comparison group that we are unable to account for.

Clinical and prevention programs should target both maltreated males and females, being cognizant that a history of multiple incidents of maltreatment as well as specific maltreatment types may initiate a trajectory of sexual risk. Pediatric clinicians have a responsibility to screen at-risk youth for maltreatment experiences, and for maltreated adolescents, screening for sexual risk behaviors is essential[25]. Many maltreated youth, especially those in foster care, get most of their sexual information in the school setting [26]. Some school sex education programs only teach about abstinence, which has not proven effective in decreasing sexual risk behaviors[27, 28]. Pediatric clinicians are in a position to augment and clarify sexual risk prevention information during primary care visits as well as connect maltreated youth to evidence-based successful comprehensive community-based sex education programs [29].

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Table 1
Sample Characteristics For Time 4

Demographic Variable	Group	
	Maltreated	Comparison
N	169	82
Age (std deviation)	18.49 (1.41)	18.48 (1.47)
Gender N (%)		
Male	87 (51)	48 (58)
Female	82 (49)	34 (42)
Ethnicity N (%)		
African American	78 (46)	31 (38)
Latino	57 (34)	39 (47)
White	13 (8)	4 (5)
Mixed Biracial	21 (12)	8 (10)
Living Arrangement N (%)		
With Biological Parent	87 (52)	60 (73)
Foster Care or Extended Family	38 (22)	4 (5)
Without Caregiver	44 (26)	18 (22)

Note: Time 4 includes only those participants who indicated they were sexually active.

Table 2
Frequency and Percentage of Maltreatment Type by Gender for the Time 4 Sample

	Males (n=87)	Females (n=82)
<i>Type of Maltreatment</i>		
Sexual Abuse: n (%)	12 (14.3%)	23 (28.4%)
Physical Abuse: n (%)	51 (60.7%)	36 (44.4%)
Emotional Abuse: n (%)	41 (48.8%)	45 (55.6%)
Neglect: n (%)	71 (84.5%)	58 (71.6%)

Note: Due to co-occurrence of maltreatment the number of each type will add up to more than the total number of males or females; 70% of the maltreated sample experienced more than one maltreatment type

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Table 3
Descriptive Statistics for Outcome Variables by Maltreated versus Comparison Group

	Maltreated	Comparison
N	169	82
<i>For sexually active adolescents</i>		
Age at 1st intercourse: Mean (SD)	14.84 (1.90)	15.74 (1.86)
Number of lifetime sexual partners: Mean (SD)	2.51 (1.21)	2.28 (1.19)
Ever had a one night stand: n (%)	75 (45%)	29 (35%)
Ever has sex under the influence: n (%)	59 (35%)	28 (34%)
Ever had sexual intercourse without a condom: n (%)	122 (73%)	60 (73%)
Contraceptive use "never/hardly ever": n (%)	55 (33%)	30 (37%)
Ever pregnant: n (%)	61 (36%)	21 (26%)
<i>For those who were involved in a pregnancy</i>		
Number of pregnancies: Mean (SD)	1.78 (1.02)	1.50 (.79)
Age at 1st Pregnancy: Mean (SD)	16.31 (1.49)	17.00 (1.41)

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Table 4
Sexual Risk Behaviors of Maltreated and Comparison Adolescents

	Age at 1st intercourse (in years) ^a	# lifetime sexual partners ^a	Ever had a one night stand ^b	Ever has sex under the influence ^b	Frequency of contraception use ^b	Ever pregnant ^b	# pregnancies ^c	Age at 1st Pregnancy ^d
Model 1: Maltreatment vs. Comparison								
Maltreatment (vs comparison)	14.90 vs 15.69**		OR=1.88*			OR=2.07*		
Maltreatment (vs comparison)	14.86 vs 15.79**	2.52 vs 2.19**	OR=2.26**				1.62 vs 1.18**	
Gender (males vs females)	14.75 vs 15.90**	2.83 vs 1.88**	OR=2.91**			OR=.37**	1.72 vs 1.11**	
Maltreatment × gender		*				**		
Maltreated males vs maltreated females		3.09 vs 1.95*				OR=.12**		
Maltreated females vs comparison females						OR=6.98**		
Comparison males vs comparison females		2.45 vs 2.05*						
Model 2: Maltreatment Type								
<i>Physical abuse vs. Other maltreated vs. Comparison</i>								
Physical abuse (vs comparison)			OR=2.36*					
Physical abuse (vs comparison)			OR=2.67*					
Gender (ref=female)			OR=2.46**					
Physical abuse × gender						*		
PA females vs other maltreated females								
PA females vs comparison females						OR=9.42**		
<i>Sexual Abuse vs. Other Maltreated vs. Comparison</i>								
Sexual abuse					*			
SA vs other maltreated					OR=3.34**			
SA vs comparison					OR=3.51*			
Sexual abuse			*	**	*			
SA vs other maltreated			OR=2.62*	OR=3.21**	OR=3.11**			
SA vs comparison			OR=3.82*		OR=3.59*			

	Age at 1st intercourse (in years) ^a	# lifetime sexual partners ^a	Ever had a one night stand ^b	Ever has sex under the influence ^b	Frequency of contraception use ^b	Ever pregnant ^b	# pregnancies ^c	Age at 1st Pregnancy ^d
Gender (ref=female)				OR=3.10**	OR=.67**			
Sexual abuse × gender				*				
SA females vs other maltreated females				OR=6.00**				
Other maltreated males vs other maltreated females				OR=4.66**				
<i>Emotional Abuse vs. Other Maltreated vs. Comparison</i>								
Emotional abuse (vs other maltreated)				OR=.48*				
Emotional abuse (vs other maltreated)				OR=.47*				
Gender (ref=female)				OR=2.51*				
<i>Neglect vs. Other Maltreated vs. Comparison</i>								
Neglect (vs comparison)			OR=2.03*					
Neglect (vs comparison)			OR=2.39**					
Gender (ref= females)			OR=3.11**			OR=.10**		
Neglect × gender						*		
Neglected females vs other maltreated females						OR=.629**		
Neglect females vs comparison females						OR=14.69**		
Model 3: Number of Maltreatment Victimization								
Maltreatment victimizations						OR=1.11**		$\beta=-.24^*$
Maltreatment victimizations						OR=1.10**		$\beta=-.24^*$
Gender (ref=female)						OR=.37**		
Maltreatment victimizations × gender (ref=female)						OR=.78**		

Note: Superscript refers to statistical test used for that variable;

^aMANOVA,

^bLogistic regression,

^cPoisson regression,

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Linear regression; OR=Odds Ratio, MANOVA results indicate adjusted means

* p<.05

**

p<.01; non significant coefficients are not shown; The outcome, ever had sex without a condom, is not included since there were no significant findings. For the outcomes number of pregnancies and age at first pregnancy only those who reported ever being involved in a pregnancy were included in the analyses. PA=physical abuse; SA=sexual abuse; ref=reference variable; OR=Odds Ratio.