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## Associations between childhood maltreatment and sex work in a cohort of drug-using youth

**Jo-Anne Madeleine Stoltz, PhD,**

*BC Centre for Excellence in HIV/AIDS, jstoltz@cfenet.ubc.ca*

**Kate Shannon, MPH,**

*Faculty of Medicine, University of British Columbia, kshannon@cfenet.ubc.ca*

**Thomas Kerr, PhD,**

*BC Centre for Excellence in HIV/AIDS; Faculty of Medicine, University of British Columbia, tkerr@cfenet.ubc.ca*

**Ruth Zhang, MSc,**

*BC Centre for Excellence in HIV/AIDS, rzhang@cfenet.ubc.ca*

**Julio J. S. Montaner, MD, FRCPC, and**

*BC Centre for Excellence in HIV/AIDS, Faculty of Medicine, University of British Columbia, jmontaner@cfenet.ubc.ca*

**Evan Wood, PhD**

*BC Centre for Excellence in HIV/AIDS, Faculty of Medicine, University of British Columbia, ewood@cfenet.ubc.ca*

### Abstract

Although research has examined the impacts of childhood maltreatment among various marginalized populations, few studies have explored the relationship between child abuse and subsequent involvement in sex work among drug using street-involved youth. In the present study, the relationships between the level of childhood maltreatment and involvement in sex work were examined using the Childhood Trauma Questionnaire (CTQ) as part of an extensive interview protocol in an ongoing prospective cohort study of street-involved youth in Vancouver Canada. Between September 2005 and June 2006, 361 youth were recruited using extensive outreach methods and snowball sampling. The prevalence rates for abuse in the sample were 73% for physical abuse; 32.4% for sexual abuse; 86.8% for emotional abuse; 84.5% for physical neglect; and 93% for emotional neglect. Univariate and logistic regression analyses demonstrated that not only was sexual abuse independently associated with sex work, but emotional abuse was as well. These findings have implications for early intervention efforts aimed at vulnerable, high risk youth populations as well as intervention strategies for active sex trade workers.

### Keywords

child abuse; sex work; street youth; substance abuse, Canada

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**Corresponding Author:** Dr. Jo-Anne Madeleine Stoltz BC Centre for Excellence in HIV/AIDS Vancouver, BC CANADA [Proxy] jstoltz@cfenet.ubc.ca.

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## INTRODUCTION

Childhood maltreatment is pervasive and known to be associated with a variety of adverse effects on health and social functioning (Allen, Simpson, Lalonde, & Phaneuf, 1998; Briere & Elliott, 2003; Doyle, 2001). Recently, the United Nations released the findings of its first comprehensive, global study of violence against children (Pinheiro, 2006), in which 131 governments worldwide participated. The report states that although many forms of violence against children have long been noted, the magnitude of the problem is only just coming to light. Among the strongest findings is that although some violence in children's lives is unexpected and isolated, the vast majority is experienced at the hands of those closest to them, namely parents, caregivers, teachers, schoolmates, employers.

Within the general North American population, recent prevalence estimates for sexual and physical abuse stand at 14% for men and 32% for women, and 22% for men and 20% for women respectively (Briere & Elliot, 2003). Early sexual abuse alone has been linked to sexual risk behavior among the general population (Steel & Herlitz, 2005), to sexual HIV-risk behaviors among adult females (Parillo, Freeman, Collier, & Young, 2001), and to drug use among youth populations (Perkins & Jones, 2004; Swanston, Plunkett, O'Toole, Shrimpton, Parkinson, & Oates, 2003).

Research has shown that childhood sexual and/or physical abuse significantly predicts engagement in sex work among selected populations, including: adult females (Bagley & Young, 1987; Farley & Cotton, 2005; Potter, Martin, & Romans, 1999; Simons & Whitbeck, 1991); men who have sex with men (Kalichman, Gore-Felton, Benotsch, Cage, & Rompa, 2004; O'Leary, Purcell, Remien, & Gomez, 2003); female adolescent populations (Bagley, 1999; Simons & Whitbeck, 1991); drug using men and women (Braitstein, Tyndall, Spittal, O'Shaughnessy, Schilder, Johnston, et al., 2003); and male/female adolescent populations (Seng, 1989). These findings are of concern given the well-known risks associated with sex work among drug-using populations, including high rates of violence and assault, homelessness, social isolation, and sexual and drug-related harms. For example, in Canada, the largest ever serial killer investigation is currently underway, with most of the victims involved being drug addicted sex workers from Vancouver's notorious Downtown Eastside neighborhood. Many more women from the Downtown Eastside have still not been accounted for—in all, there are sixty-one unsolved cases of disappearances of women since 1982 (CBC News, 2006), most of whom were known to be drug users and sex workers. Although there are many known risks involved for both male and female sex workers such as sexually transmitted disease, transmission of blood-borne pathogens such as HIV and Hepatitis C (Medrano, Desmond, Zule, & Hatch, 1999), and potential victimization and violence (Farley & Cotton, 2005), the Vancouver tragedy underscores the most severe harms involved in sex work within heavy drug using communities.

Despite what is known about the potential link between prior abuse and engagement in sex work, a number of gaps remain. First, while the definition of child maltreatment in reporting legislation in many jurisdictions has expanded in recent decades to include not only sexual and physical but emotional abuse and physical and emotional neglect, few studies separate out these types of childhood maltreatment among participants (Medrano et al., 1999; Rodgers, Lang, Laffaye, Satz, Dresselhaus, & Stein, 2004; Spatz Widom & Kuhns, 1996). Although evidence shows a high co-occurrence of multiple types of childhood maltreatment, typically studies focus on single types, usually either sexual or physical abuse (Bernstein, Stein, Newcomb, Walker, Pogge, Ahluvalia, et al., 2003). Second, research looking at childhood abuse as a predictor of sex work involvement has primarily focused on sexual abuse within adult female populations. Much less is known about associations between childhood abuse and sex work among males, and among vulnerable populations such as street-involved youth and

drug users. Lastly, research on childhood maltreatment is often limited by legal reporting requirements. In most North American jurisdictions, researchers are required to report disclosures of childhood abuse of legal minors to authorities, which can pose a challenge to establishing trust relationships with youth research participants and can result in limited abuse research with this population. However, because youth who are involved in sex work represent an especially vulnerable population, and because of the need for research that can inform early intervention efforts, studies looking at childhood abuse among vulnerable youth populations are particularly important. The present study was therefore conducted to evaluate how various types of childhood maltreatment (sexual, physical, and emotional abuse, and physical and emotional neglect) may be associated with subsequent engagement in sex work within a population of high-risk street-involved youth.

## METHODS

### Study Population

The At Risk Youth Study (ARYS) is a prospective cohort study of street-involved youth in downtown Vancouver, Canada. As described elsewhere (Wood, Stoltz, Montaner, & Kerr, 2006), snowball sampling and street-based outreach were employed to recruit a sample of street-involved drug using youth. Youth were enrolled if they were between 14 and 26 years of age, and had used illicit drugs other than marijuana in the past 30 days. Data collection procedures for the ARYS cohort involve semi-annual blood sampling for measurement of HIV and Hepatitis C (HCV) antibodies, along with completion of an interviewer-administered questionnaire.

### Measures

As part of the interview, participants complete the Childhood Trauma Questionnaire (CTQ), a 28-item instrument developed to retrospectively assess trauma resulting from child abuse and neglect (Bernstein & Fink, 1998). The Trauma Questionnaire yields a trauma severity category for each of five types of childhood maltreatment: physical, sexual, and emotional abuse, and physical and emotional neglect. The Questionnaire has been validated with substance abusing populations and adolescent clinical populations, and has shown excellent convergent and discriminant validity with measures of trauma (Bernstein et al., 2003; Fink, Bernstein, Handelsman, Foote, & Lovejoy, 1995). During the consent process, participants were informed of the researcher's duty to report child abuse when participants under age 19 (the legal age of majority in British Columbia) disclose abuse in the course of answering survey questions, and all interviewers were trained in the reporting protocol. In cases where reporting was required, efforts were made to report with the participant's full knowledge, consent, and cooperation; participants were also offered referrals to free and available community counseling services. Pre- and post-test HIV counselling and referral to health services were also provided as part of the study. The current analysis includes youth who were enrolled between September 2005 and June 2006, and the University of British Columbia's Research Ethics Board provided ethical approval for the study.

### Statistical Analysis

First, we explored history of childhood abuse using the Trauma Questionnaire. Twenty-five items measure physical, sexual, and emotional abuse and physical and emotional neglect as scores on five subscales. Using a five-point scale, participants provide ratings for statements such as 'When I was growing up I had to wear dirty clothes' and 'I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor'. Each scale yields a total score for that type of maltreatment. The measure then provides predetermined cut-off scores for translating the scores from the five scales into a trauma level for each type of maltreatment (Bernstein & Fink, 1998). The four levels of trauma are none (to minimal), low (to moderate),

moderate (to severe), and severe (to extreme). For the analysis, we chose to collapse these four trauma levels into two: none/low, and moderate/severe. We justified this decision based on previous studies involving drug-using populations which have shown that dichotomizing abuse into 'abuse' versus 'no abuse' produces few significant findings (Medrano, Hatch, Zule, & Desmond, 2002). There is also a three-item minimization and denial scale used to detect underreporting of maltreatment, and participants were excluded from analysis if they scored above pre-determined cut-offs.

Univariate associations were then tested between each of the five abuse variables and a number of socio-demographic variables. Among these, ethnicity was dichotomized as Aboriginal vs. all other due to concerns about the large number of Aboriginal youth involved in sex work in downtown Vancouver. The socio-demographic variables included: age; gender; ethnicity (Aboriginal vs. all other; Aboriginal included First Nations, Aboriginal, Métis, and Inuit; all other included Caucasian, Chinese, South-Asian, Other Asian, Latin American, Middle Eastern, and Black-African, Black-Caribbean, and other Black); homeless in past six months (yes vs. no; homeless was defined as having no fixed address or sleeping on the street); having spent more than one month in an alternative care situation (such as foster care, group home, ward of the state, etc. [yes vs. no]); having ever dropped out of school (yes vs. no); average daily amount of money spent on drugs (less than \$50.00 daily vs. \$50.00 or more daily); having ever injected drugs (yes vs. no), and ever having traded sex for money or gifts (yes vs. no; gifts also included food, shelter, clothes, and drugs). All variable definitions had either been used extensively in prior research, or were conceptually derived from the literature.

Consistent with prior studies using the Childhood Trauma Questionnaire (Paivio & McCulloch, 2004; Yehuda, Halligan, & Grossman, 2001), we fit five separate multivariate logistic regression models for each of the five types of abuse. Variables that were associated with the relevant abuse scale at the  $p < .05$  level in univariate analyses were included in a fixed regression model. In this way, we could assess the strength of association between each type of abuse and sex work while controlling for the socio-demographic variables. This approach also avoided the issue of collinearity between the various measures of abuse. Lastly, Pearson correlations were conducted between all pairs of variables to show the degree of overlap.

All statistical analyses were performed using SAS software version 8.0 (SAS, Cary, NC), and all  $p$ -values are two sided.

## RESULTS

Between September 2005 and June 2006, 361 street-involved youth were recruited into the ARYS cohort. The mean age of the sample was 22 (Interquartile range 20.3-24.1), 106 (29%) were female, and 86 (24%) were Aboriginal. Eighty-four (23%) of the participants reported trading sex for money or gifts at least once in their lives. For analyses involving the Trauma Questionnaire subscales, 20 participants were excluded due to their scores on the minimization/denial scale. Possible scores on this scale are 1, 2, or 3, and participants were excluded if they scored higher than 1. The prevalence of abuse in the sample (based on scores higher than 'none' for each subscale on the Questionnaire) was as follows: 73% reported physical abuse; 32.4% reported sexual abuse; 86.8% reported emotional abuse; 84.5% reported physical neglect; and 93% reported emotional neglect. Only six participants out of 341 (2%) reported no abuse at all on all five subscales combined. Cronbach's alpha for the five abuse scales was good, ranging from .75 - .83.

Table 1 shows univariate associations between five types of childhood maltreatment and the socio-demographic variables, including sex work involvement. As shown, moderate to severe trauma scores were associated with sex trade at the univariate level for sexual abuse (OR =

3.74, 95% CI: 2.17-6.46,  $p < .001$ ); physical abuse (OR = 2.31, 95% CI: 1.37-3.90,  $p = 0.002$ ); emotional abuse (OR = 2.23, 95% CI: 1.30-3.82,  $p = 0.003$ ); and for emotional neglect (OR = 1.71, 95% CI: 1.02-2.88,  $p = 0.041$ ). Physical neglect was not associated with sex work.

Table 2 shows the multivariate logistic regression analyses examining the associations between five types of childhood maltreatment and sex work after adjusting for relevant socio-demographic variables. As indicated, sex trade remained independently associated with sexual abuse (AOR = 2.88, 95% CI: 1.60-5.17,  $p < .001$ ); and with emotional abuse (AOR = 2.26, 95% CI: 1.31-3.89,  $p = 0.003$ ) after adjusting for all variables that were associated with the given form of maltreatment at  $p < 0.05$  in univariate analyses. Physical abuse, physical neglect, and emotional neglect were not independently associated with sex trade.

Lastly, Table 3 shows the degree of overlap between the five abuse variables. All correlations were significant at  $p < .0001$ . Note, however, that sexual abuse was the most weakly associated of all variables in relation to emotional abuse, and that emotional abuse was similarly correlated with all other types of abuse in relation to sexual abuse.

## DISCUSSION

The present study examined the association between five types of childhood maltreatment and sex work involvement among drug using street-involved youth. A high prevalence of abuse was found, with rates ranging from 32.4% to 93%. These rates are similar to a recent, methodologically comparable study of adult drug users (Medrano et al., 2002). Further, two types of childhood maltreatment, sexual abuse and emotional abuse, were found to be independently associated with sex work after controlling for socio-demographic variables. Because we were not able to assess the additive burden of abuse due to collinearity of variables, we restricted the analysis to the relationship between each of the separate types of abuse and sex trade involvement.

In terms of the separate associations between sexual abuse and sex work, and emotional abuse and sex work, a number of points can be made. First, a possible explanation for the association between childhood sexual abuse and later sex work involvement may be that children who are sexually victimized develop psychologically and emotionally in ways that make them vulnerable to continuing sexual predation. Conversely, childhood sexual abuse may create a propensity in the victim toward risk taking behaviours (substance use, running away from home [Kingree, Braithwaite, & Woodring, 2001; Tyler, Hoyt, & Whitbeck, 2000]) that in turn lead to situations in which survival sex work is one of few remaining options.

The connection between childhood emotional abuse and later sex work involvement may involve similar factors. Emotional abuse has been defined as “acts of omission and commission committed by parent figures, which are judged to be psychologically damaging on the basis of a combination of community standards and professional expertise” (Doyle, 2001, p. 388). A review by Spertus, Yehuda, Wong, Halligan, and Seremitis (2003) lists a number of emotional and psychological effects of emotional abuse, including depression, anxiety, suicidality, low self-esteem, personality disorders, poor body image, sexual dysfunction, and compromised physical health. These psychological effects may combine to create a vicious circle for many youth, wherein poor coping skills and resources are not adequate for the high-risk situations in which they find themselves, thereby increasing their dependence on strategies such as trading sex for survival. This in turn would compound risks for which they are poorly equipped, perpetuating a downward spiral from which it is difficult to break free without external intervention.

The finding that trauma associated with emotional abuse was independently associated with sex work among street-involved youth was unexpected. Although severe emotional abuse in

childhood using the Childhood Trauma Questionnaire was recently found to interact with Black ethnicity in independently predicting involvement in sex work among an adult female drug-using population (Medrano et al., 2003), this is the first study of its kind to show an independent relationship between childhood emotional abuse and youth involvement in sex work. The finding has important implications for intervention programs that address high risk behaviors such as sex work among youth. Not only do interventions need to address childhood sexual abuse as a risk factor—for which there has been evidence for some time—but attention also needs to be paid to experiences of emotional abuse as a potential determinant of high risk behavior.

Challenges to service delivery models that address childhood emotional abuse need to be considered, however, as emotional abuse can be more difficult to assess than sexual or physical abuse or physical neglect. When situated within the context of sex work involving drug using populations, a number of implications emerge for working with vulnerable populations who have experienced childhood emotional abuse. Sex work takes place within a complex interaction of contextual, social, structural, and psychological factors that mediate negotiations regarding condom use, selection of partners, sexual and drug-related practices, and health seeking behaviors. Given that childhood emotional abuse has been previously associated with lifetime exposure to trauma and increased vulnerability in high-risk situations (Spertus et al., 2003), and in this study was found to predict engagement in sex work among street-youth, the current absence of prevention and harm reduction strategies that screen for emotional abuse among drug-using youth and adolescent initiates of sex work is of particular concern. Harm reduction strategies targeting street-involved youth need to consider the impacts of unaddressed emotional abuse on negotiation of sexual and drug-related risk behaviors and the potential impact of power dynamics on youths' ability to protect themselves. Interventions effective at reducing harms associated with early emotional abuse will need to be situated within the larger social, structural and environmental context of sex work among drug-using youth. The current prohibitive framework of sex work in the Canadian setting has been shown to displace sex workers to dark and deserted areas and further from social supports, thereby decreasing sex workers' ability to protect themselves and increasing vulnerability to violence and assault (Goodyear, Lowman, Fischer, & Green, 2005). Previous studies have shown that enhanced social support and reduced social isolation are important protective mechanisms against past emotional abuse (Doyle, 2001). Socio-legal policy reforms that reduce harms and the social isolation faced by sex workers and that facilitate sex workers' ability to negotiate their situation may be crucial in engaging this population and countering the adverse impacts of past emotional abuse. In addition, given the increased distrust among those with a history of emotional abuse (Doyle, 2001; Medrano, et al., 2003) coupled with high levels of stigma and criminalization of sex work, innovative strategies and policy reforms that actively engage drug using youth in the development and implementation of interventions will likely be effective in facilitating access to social support and building trust among emotionally-abused drug-using youth. Finally, childhood emotional abuse has been shown to result in low self-efficacy and self-care (Spertus, et al., 2003), suggesting that capacity-building and low threshold employment and skills training may help to mediate the adverse impacts of past emotional abuse among this population of street youth. Ultimately, of course, the goal of such interventions would be to help youth transition out of the high-risk environments of the street and the sex trade completely. It is recognized, however, that a multi-systemic approach is required to meet this objective, which goes beyond front-line interventions and addresses the root causes of dysfunction in families and society at large.

Lastly, high linear correlations between the five types of abuse were statistically confirmed for this population, and the specific correlations say something about how different types of abuse combine. Of specific interest is that, when examining the correlations with emotional abuse, sexual abuse was in fact more weakly correlated in comparison to physical abuse, emotional

neglect, and physical neglect. This offsets somewhat our concerns that the prevalence of trauma associated with emotional abuse may have been inflated due to confounding with sexual abuse.

## Limitations

The present study is limited first by the fact that despite extensive street-based outreach efforts and snowball sampling methods, the sample is not representative. Of note, despite recruitment efforts, females and younger youth (ages 14 to 18) may be under-represented, and the study may not fully reflect issues specific to these groups. Having said that, the demographics of the ARYS cohort are consistent with other studies of street-involved youth conducted in the same locale (Ochnio, Patrick, Ho, Talling, & Dobson, 2001). Nevertheless, the findings should be interpreted with caution and limits to generalizing to other street-involved youth populations recognized.

Next, it is acknowledged that samples involving marginalized populations are vulnerable to socially desirable responding (Des Jarlais, Paone, & Milliken, 1999). This bias may be compounded in this sample among participants under age 19 who were warned in the consent process about the researcher's duty to report abuse to authorities. However, with regard to self-reporting of abuse, there is previous evidence indicating that false-negative reports of abuse are more common than false-positive reports (Bernstein & Fink, 1998). Other behaviors explored in the study may be underestimated, such as injection drug use and sex work involvement, despite reassurances of confidentiality and interviewer efforts to build trust and rapport with participants. Therefore, due to a possible bias toward under-reporting in the sample, findings should be considered as likely conservative estimates.

It is also possible that the prevalence of trauma associated with emotional abuse has been inflated due to confounding with sexual abuse. Due to the high correlations found between variables in the study we were unable to examine the independent effect of the various forms of abuse. As such future research should explore the potential association between childhood emotional abuse and sex work involvement, in the absence of childhood sexual abuse.

## Conclusion

In summary, the study extends the literature on associations with childhood maltreatment among vulnerable populations in a number of ways. First, it parses different types of childhood maltreatment experienced by those who engage in sex work, and the level of trauma associated with each. It also focuses on those who may be especially vulnerable to the type of tragic consequences described at the beginning of this paper—young people who use drugs and engage in sex work. We found that separating types of childhood maltreatment into physical, sexual and emotional abuse, and physical and emotional neglect yields a more precise contextual description of associations with sex work among street-involved youth than previous studies. The finding that not only childhood sexual abuse, but also childhood emotional abuse independently associated with sex work has important implications for intervention efforts with high risk youth. In order for early intervention efforts to be successful with youth, they must have an evidence-based foundation and be relevant to youth's life experiences. As we are currently witnessing in the Downtown Eastside Vancouver, the cost of neglecting early intervention efforts is too high in too many sectors—public health, the justice system, civil society, and personal lives.

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**Table 1**  
Odds ratios (95% CI) for Bivariate Associations Between the Five Types of Childhood Maltreatment and Socio-demographic and Drug Use Characteristics.

Characteristic	Childhood Maltreatment at Moderate-Severe Levels				
	Sexual Abuse	Physical Abuse	Emotional Abuse	Physical Neglect	Emotional Neglect
<b>Age</b> (Per year older)	1.07 (0.98-1.17)	1.06 (0.97-1.14)	0.98 (0.91-1.06)	0.98 (0.91-1.06)	0.92 (0.85-1.00)*
<b>Gender</b> (Male vs Female)	2.58** (1.55-4.31)	1.02 (0.63-1.65)	1.33 (0.82-2.15)	1.20 (0.75-1.94)	1.62 (1.00-2.62)*
<b>Ethnicity</b> (All other vs Aboriginal)	1.72* (1.01-2.95)	1.17 (0.70-1.94)	0.63 (0.38-1.05)	0.94 (0.57-1.56)	0.79 (0.47-1.33)
<b>Homeless last 6 months</b> (No vs Yes)	1.08 (0.61-1.90)	1.92 (1.13-3.26)*	1.52 (0.92-2.52)	1.21 (0.73-1.99)	1.23 (0.73-2.09)
<b>Separated from parents</b> (No vs Yes)	1.82 (1.11-2.98)*	2.74** (1.74-4.31)	1.19 (0.77-1.85)	1.780 (1.15-2.76)*	1.89 (1.21-2.97)*
<b>Dropped school</b> (No vs Yes)	1.47 (0.78-2.78)	2.19 (1.22-3.93)*	2.08 (1.20-3.62)*	2.056 (1.18-3.58)*	2.29 (1.24-4.24)*
<b>Spend on drugs</b> (< \$50.00 daily vs ≥ \$50.00 daily)	1.87 (1.13-3.07)*	1.71 (1.10-2.68)*	1.43 (0.92-2.24)	1.36 (0.87-2.11)	1.68 (1.07-2.64)*
<b>Ever injected drugs</b> (No vs Yes)	1.21 (0.75-1.97)	2.08 (1.34-3.24)*	1.44 (0.93-2.22)	0.81 (0.53-1.25)	0.97 (0.63-1.52)
<b>Sex Trade</b> (No vs Yes)	3.7** (2.17-6.46)	2.31 (1.37-3.90)*	2.23 (1.30-3.82)*	1.47 (0.88-2.45)	1.71 (1.02-2.88)*

\*  $p < .05$

\*\*  $p < .001$ .

**Table 2** Adjusted Odds Ratios (95% CI) for Multivariate Associations Between Five Types of Childhood Maltreatment and Socio-demographic and Drug Use Characteristics.

Characteristic	Childhood Maltreatment at Moderate-Severe Levels				
	Sexual Abuse	Physical Abuse	Emotional Abuse	Physical Neglect	Emotional Neglect
Age (Per year older)	—	—	—	—	0.89 (0.82-0.99)*
Gender (Male vs Female)	2.09 (1.20-3.65)*	—	—	—	1.29 (0.75-2.23)
Ethnicity (All other vs Aboriginal)	1.54 (0.85-2.78)	—	—	—	—
Homeless (No vs Yes)	—	1.79 (1.01-3.19)*	—	—	—
Separated from parents (No vs Yes)	1.61 (0.94-2.76)	2.67 (1.65-4.33)**	—	1.66 (1.06-2.59)*	1.70 (1.10-2.73)*
Dropped school (No vs Yes)	—	1.64 (0.86-3.13)	2.12 (1.21-3.71)*	1.96 (1.12-3.45)*	1.96 (1.03-3.74)*
Spend on drugs (< \$50.00 daily vs ≥ \$50.00 daily)	1.64 (0.96-2.79)	1.55 (0.96-2.51)	—	—	1.69 (1.04-2.74)*
Ever injected drugs (No vs Yes)	—	1.82 (1.13-2.95)*	—	—	—
Sex Trade (No vs Yes)	2.88 (1.60-5.17)**	1.59 (0.90-2.81)	2.26 (1.31-3.89)*	—	1.59 (0.90-2.83)

— indicates variables not associated with the dependent variable at  $p < 0.05$  in bivariate analyses

\*  $p < .05$

\*\*  $p < .001$ .

**Table 3**

Pearson Correlation Coefficients of Associations among Five Abuse Variables (n=308)

	Emotional Abuse	Physical Abuse	Sexual Abuse	Emotional Neglect
Emotional Abuse				
Physical Abuse	0.67			
Sexual Abuse	0.37	0.36		
Emotional Neglect	0.62	0.43	0.33	
Physical Neglect	0.52	0.47	0.42	0.60

Note: all coefficients are  $p < .0001$