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Adverse mental health outcomes associated with emotional abuse in young rural South African women: a cross-sectional study

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Abstract

There is a lack of data on the prevalence of emotional abuse in youth. The aim of this study was thus to estimate the prevalence of emotional abuse in intimate partnerships among young women in rural South Africa and to measure the association between lifetime experience of emotional abuse (with and without the combined experience of physical and/or sexual abuse) and adverse health outcomes. Between 2002 and 2003, young women from 70 villages were recruited to participate in the cluster randomized controlled trial of an HIV behavioural intervention, Stepping Stones. Data was obtained through the administration of a questionnaire at baseline. Of the 1293 women who had ever been partnered, 189 (14.6%) had experienced only emotional abuse in their lifetimes. Three hundred and sixty-six women (28.3%) experienced emotional abuse with physical and/or sexual abuse in their lifetimes, and one hundred and forty-four women (11.1%) experienced physical and/or sexual abuse without emotional abuse. Hazardous drinking was associated with the experience of physical and/or sexual abuse, with (OR 6.0, 95% CI 1.0 – 36.6) and without emotional abuse (OR 5.8, 95% CI 1.1 – 29.4). Illicit drug use (OR 5.6, 95% CI 2.4 – 12.6), having depressive symptoms (OR 2.9, 95% CI 1.2 – 4.2), having psychological distress (OR 1.9, 95% CI 1.4 – 2.6), and suicidality (OR 79.0, 95% CI 17.3 – 359.6) was associated with the experience of emotional abuse with physical and/or sexual abuse. Suicidality was also strongly associated with

having experienced emotional abuse alone (OR 79.5, 95% CI 16.7 – 377.4). This study showed that emotionally abused young women had a greater risk of suicidality than those experiencing no abuse and that the combined experience of emotional with physical and/or sexual abuse was strongly associated with poor mental health outcomes.

Keywords

Inter-personal violence; mental health; suicide; women

INTRODUCTION

Intimate partner violence (IPV), which includes physical, sexual and emotional abuse by a current or former partner (Saltzman, Fanslow, McMahon, & Shelley, 1999), is a form of gender-based violence and is a violation of women's rights. The interplay between the various forms of abuse within an intimate partnership is dynamic and differs between couples. A WHO study report presented data from 15 sites that had been collected using standardized population-based surveys. It found rates of 15% to 71% lifetime prevalence of physical or sexual partner violence (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006). Fewer studies have measured and published levels of emotional abuse, which includes a range of acts such as humiliation, intimidation, threats and controlling behaviour. Estimates of emotional abuse prevalence using various population sources and subgroups internationally range from 9% to 70% (Bonomi, Anderson, Cannon, Slesnick, & Rodriguez, 2009; Chowdhary & Patel, 2008; Coker, Smith, McKeown, & King, 2000; Deyessa, et al., 2009; Dude, 2009; Kramer, Lorenzon, & Mueller, 2004; Le Franc, Samms-Vaughan, Hambleton, Fox, & Brown, 2008; Ludermit, Lewis, Valongueiro, de Araújo, & Araya, 2010; Perales, et al., 2009; Ruiz-Perez, Plazaola-Castano, & del Rio-Lozano, 2007). In South Africa, prevalence estimates for physical IPV range from 10% to 50.5% (Dunkle, et al., 2004; R Jewkes, Penn-Kekana, Levin, Ratsaka, & Schrieber, 1999; Kaminer, Grimsrud, Myer, Stein, & Williams, 2008; Pronyk, et al., 2006; Seedat, Stein, & Forde, 2005), but an additional 22.5% to 51.4% of women report emotional abuse (Dunkle, et al., 2004; R Jewkes, et al., 1999).

IPV can have both immediate and long-term health outcomes. Associations between physical and sexual abuse and various chronic pain syndromes and physical, reproductive, gastrointestinal and psychological health problems are well documented (Campbell, 2002; Centers for Disease Control and Prevention, 2008; Deyessa, et al., 2009; Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008). However, few studies have explored whether emotional abuse alone is associated with poorer health, and those studies have often had methodological weaknesses. For example women with no abuse and those with physical or sexual abuse are often combined in comparison groups (Chowdhary & Patel, 2008; Dude, 2009; Naved & Akhtar, 2008; Tadege, 2008). Whilst an important exception was the work of Ludermit and colleagues who have shown emotional abuse to be strongly associated with post-natal depression (Ludermit, et al., 2010), the body of research elucidating the health effects of emotional abuse alone, compared to when it occurs with physical and/or sexual abuse, remains small.

One recent population-based study in Japan did compare women who experienced emotional abuse to those with no abuse and found significant associations with poor self-reported health status, suicidal ideation, difficulty in walking and performing usual activities, increased use of health services in the past month, and a number of distress symptoms (Yoshihama, Horrocks, & Kamano, 2009). Another study conducted with a convenient sample of Spanish women found significant associations between the experience of

emotional abuse and psychological distress, and the use of tranquilizers, antidepressants and illicit drugs, compared to women who had no experience of abuse (Ruiz-Perez & Plazaola-Castano, 2005).

There is thus a need to better understand associations between emotional abuse and health outcomes, and in particular to clarify whether physical and sexual abuse drives the association between IPV and poor health outcomes or if emotional abuse alone has a role in these associations. The aim of this study is to estimate the lifetime prevalence of emotional abuse in intimate partnerships among young women in rural South Africa and to measure the association between emotional abuse (with and without the combined experience of physical and/or sexual abuse) and adverse mental health outcomes.

METHODS

Between 2002 and 2003, 1415 women from a rural area of the Eastern Cape Province of South Africa were recruited to participate in a cluster randomised controlled trial of an HIV behavioural intervention, Stepping Stones. Villages with a secondary school that were within a radius of about a 1.5 hours drive away from Mthatha, and where the community was willing to participate in the study. Multistage sampling was used so that a sample of 70 clusters (villages) was first selected and then grouped into seven strata according to common features; and thereafter a sample of 15–25 men and women were selected per cluster. All participants were black South Africans.

Enrolment was limited to youth aged 15–26, who were normally resident in the village and mature enough to understand the study and the consent process. Participants were mostly recruited from schools after meetings were held to explain the study. Here they were informed of the questionnaires that would be completed through interviews, the blood tests that would be collected and the HIV prevention intervention that they would be expected to attend. Participants were only enrolled about a week later so that they had time to consider the decision. At this point, informed consent was obtained on an individual basis for completion of the questionnaire and collection of the blood. A detailed description of the study's methodology has been reported elsewhere (R Jewkes, et al., 2006). All participants were given 20 rand (about \$2.20) after each interview. Ethical approval for the study was obtained from the University of Pretoria Ethics Committee.

Data collection

Data presented here are drawn from the pre-intervention baseline assessment of the female participants. After enrolment, participants completed a face to face interview with trained female interviewers and gave blood for HIV and HSV2 testing. The baseline questionnaire consisted almost entirely of questions that had been previously used in surveys in South Africa or were components of standard instruments. The HIV and HSV2 results are not presented in this paper.

Measure of abuse—The female participants were asked about their experiences of emotional abuse, physical violence and sexual violence from any intimate male partner using a slightly adapted version of the WHO violence against women instrument (World Health Organization, 2000), which was designed for use in developing countries. Women were asked if they experienced any of the acts of abuse never, once, a few or many times. Participants were also asked if they had experienced these acts during the past 12 months or prior to that by a current or previous intimate partner. Intimate partners included boyfriends, or someone that they were married to or lived with. A woman was considered to be abused if she had experienced any of the acts of abuse at least once. Five items covered emotional abuse where an intimate partner insulted, belittled/humiliated, scared/intimidated, threatened

to hurt the participant or stopped her from seeing friends. Physical violence was considered to have occurred if the participant experienced any of the following acts: being pushed, shoved, slapped, hit with fist, kicked, beaten up, strangled, burnt, hurt/threatened with a weapon, or had something thrown at her. The measure for sexual violence included being physically forced to have sex, having sex when frightened of the consequences, or being forced to perform oral or anal sex. As some previous studies have reported on higher risk behaviour or poor health outcomes after even a single episode of abuse (Green, et al., 2000; Jun, Rich-Edwards, Boynton-Jarrett, & Wright, 2008; Krupnick, et al., 2004), a decision was made to include these into the exposure variable.

Mental health outcomes—Health outcomes considered in this study were hazardous drinking behaviour, illicit drug use, elevated depressive symptoms, psychological distress and suicidality. Alcohol use and dependence was assessed using the Alcohol Use Disorders Identification Test (AUDIT) scale (Saunders, Aasland, Babor, Fuente, & Grant, 1993). In this study a score of eight or more was considered to be an indicator of hazardous drinking behaviour (Cronbach's alpha 0.77) (Babor, Higgins-Biddle, Saunders, & Monteiro, 2002). Participants were considered to have used drugs if they disclosed to have ever used marijuana, mandrax, injectable drugs, substances that were sniffed or other substances.

The Centre for Epidemiologic Studies Depression Scale (CES-D) with a score of 16 or more was considered to signify elevated symptoms of depression (Cronbach's alpha 0.88) (Zich, Attkisson, & Greenfield, 1990). In addition, taking into consideration the cultural context, three items were used to measure an indigenous idiom of psychological distress. This included a perceived feeling of the heart being painful, spirit being low and thinking too much in the last week. A score of 3 or more on this scale (maximum possible score of 9) was considered to indicate high levels of distress (Cronbach's alpha 0.86). Participants were also questioned about suicidal ideations in the past month.

Covariates—The questionnaire collected information on social and demographic factors including age, education, socio-economic status and trauma in childhood. Education was grouped into two categories: participants who completed levels of school up to and including grade 10, and those who completed senior grades of high school or obtained further education (>grades 11 and tertiary education). Socio-economic status was measured using a scale that captured household level ownership of a television, a car, frequency of hunger, frequency of having meat, and perceived difficulty accessing R100 (~\$11 in 2009) for a medical emergency (Cronbach's alpha = 0.60). Childhood adversity was assessed using a modified version of the short form of the Childhood Trauma Questionnaire (CTQ) (Bernstein, et al., 1994) (Cronbach's alpha=0.71), whereby five types of childhood trauma were measured. These included 17 statements of personal experiences related to emotional neglect, emotional abuse, physical neglect/hardship, physical abuse and sexual abuse, and have been shown to be associated with mental health outcomes in women (RK Jewkes, Dunkle, Nduna, Jama, & Puren, 2010). Factor analysis was used on the socioeconomic and childhood trauma scales after Cronbach's alphas were calculated to confirm the selection of variables for the scales.

Statistical analysis

This study included all women who reported that they had ever been partnered (n=1293) but 100 participants (7.2%) who had missing data on key variables were excluded. A four category exposure variable was generated for lifetime experience of abuse. The categories were no experience of abuse, experience of emotional abuse only, experience of physical and/or sexual abuse only, and experience of physical and/or sexual abuse combined with emotional abuse. Health outcomes were defined as described above.

The methods used for data analyses took into consideration the multistage nature of the selection of study subjects. The initial analyses were done with descriptive statistical techniques, including frequency distributions for categorical variables and summary statistics for continuous variables. Tests for significance between exposure categories are not presented (Von Elm, et al., 2008).

Separate logistic regression models were built to describe the association between the exposure and each health outcome after adjusting for possible socio-demographic confounders that were selected apriori. Generalised mixed models were used to obtain the odds ratios and 95% confidence intervals, taking into consideration the cluster design of the study. Adjusted odds ratio and confidence intervals are presented. All of the data were analysed using STATA 10.0. A p-value of 0.05 or less was considered to be significant.

RESULTS

Demographic characteristics and health outcomes are presented for the group and each exposure category in Table 1. The mean age of the women was 18.2 years. Most of the women were in poor socio-economic circumstances, with more than thirty percent stating that people at home often or sometimes go hungry. Most of the women (n=1116, 86.3%) had also suffered some childhood adversity (selected results shown in table).

The co-occurrence of experiences of emotional, physical and sexual abuse is presented in Figure 1. Of the 1293 women who had ever been partnered, 189 (14.6%) had experienced only emotional abuse in their lifetimes. Three hundred and sixty-six women (28.3%) experienced emotional abuse with physical and/or sexual abuse in their lifetimes, and 144 (11.1%) experienced physical and/or sexual abuse without emotional abuse. Nearly half of the women (n=594, 45.9%) had experienced no abuse in their lifetime. Of the 189 women who had experienced emotional abuse only, 174 (92.1%) had experienced the abuse in the last year.

Unadjusted and adjusted models showing the association between mental health outcomes and experience of different patterns of lifetime abuse are presented in Table 2. Hazardous drinking was associated with the experience of physical and/or sexual abuse, with (OR 6.0, 95% CI 1.0 – 36.6) and without emotional abuse (OR 5.8, 95% CI 1.1 – 29.4), but not with the experience of emotional abuse alone. Drug use was associated with the experience of emotional abuse with physical and/or sexual abuse (OR 5.6, 95% CI 2.4 – 12.6).

Having depressive symptoms was associated with experience of physical and/or sexual abuse with emotional abuse, but not with experience of any of these forms of abuse alone. This broadest abuse exposure was also associated with psychological distress measured using the indigenous idiom, (OR 1.9, 95% CI 1.4 – 2.6), and indeed the group who had been exposed to physical and/or sexual violence without emotional abuse were less likely to report distress. Suicidality was strongly associated with having experienced emotional abuse alone in both the unadjusted (OR 71.7, 95% CI 15.8 – 325.2) and adjusted models (OR 79.5, 95% CI 16.7 – 377.4).

DISCUSSION

Just under half of the women in the study suffered from emotional abuse ever in their lifetimes, (n=555, 42.9%). The proportion of women who experienced some form of abuse (n=699, 54.1%) was large, especially considering that the study population included mainly young women who had only had relationships for a few years. South Africa is known to be a very violent society, with high rates of intimate partner violence (R Jewkes, Levin, & Penn-Kekana, 2002). The violent behaviour is considered to be due to various factors, including

the previous apartheid regime and the strong patriarchal nature of society (R Jewkes, et al., 2002; Wood & Jewkes, 2001). There is a strong feeling and acceptance by communities that men are expected to control women (R Jewkes & Morrell, 2010). In intimate partnerships, this plays out in acts of physical and sexual abuse, but emotional abuse has not been as well documented.

Compared with those experiencing no abuse, emotional abuse alone was only associated with an elevated risk of suicidality. Physical and/or sexual abuse were only associated with an elevated risk of hazardous drinking, and the risks of psychological distress were actually lower for women who experienced physical and/or sexual abuse compared with women experiencing no abuse. Yet exposure to emotional abuse in addition to physical and/or sexual abuse significantly increased the likelihood of all the adverse mental health outcomes studied. These findings strongly suggest that the dynamics of the experience of emotional abuse in conjunction with physical and/or sexual abuse are distinctly different from the experience of just one form of abuse. This finding supports that of Ludermir et al (2010). This could also represent a more serious form of abuse, where the combination of all three forms of abuse is a marker for more severe abuse of all sorts (Garcia-Moreno, et al., 2006). An added strength of this analysis was that all associations for mental health outcomes were controlled for experience of childhood adversity which is often ignored in other studies assessing intimate partner violence and mental health outcomes.

Previous studies (Garcia-Moreno, et al., 2006; Heise & Garcia-Moreno, 2006; Testa, Livingston, & Leonard, 2003; Tucker, Wenzel, Elliott, Marshall, & Williamson, 2004) have reported an association between physical and/or sexual abuse with both drug and alcohol misuse. One study reported an association between emotional abuse and the use of tranquilizers, antidepressants and illicit recreational drugs but not with alcohol abuse (Ruiz-Perez & Plazaola-Castano, 2005). The lack of an increased risk of alcohol use associated with emotional abuse alone could possibly be explained by a pattern in which drinking heavily increases the risk of physical or sexual abuse, rather than drinking being a response to the abuse in this school-going population, where drinking heavily was infrequently reported. Having experienced emotional abuse with physical and/or sexual abuse was associated with a much greater likelihood of hazardous drinking behaviour and drug abuse, which in this study was mainly solvent/benzene sniffing and cannabis usage.

As found in other studies (Chowdhary N & Patel V, 2008; Naved & Akhtar, 2008; Tadesge, 2008; Yoshihama, et al., 2009), there was a higher odds of suicidality in emotionally abused women (with or without physical and/or sexual abuse) as compared to women who suffered no emotional abuse. No association was found between suicidality and the experience of physical and/or sexual abuse alone. Since suicide is one of the most severe outcomes of exposure to abuse, this highlights that emotional abuse should not be discounted when compared to physical and sexual abuse. The combined experience of emotional abuse with physical and/or sexual abuse increased the risk of depressive symptoms and psychological distress. It is interesting that this group of women was apparently more resilient to the experience of either emotional abuse, or physical and/or sexual abuse alone. This is not a finding that would have been predicted from the literature. Yet it seems that emotional abuse, which is often an on-going experience in a relationship, when combined with physical or sexual violence (Heise & Garcia-Moreno, 2006), may have a greater effect on mental health status than the episodic experiences of physical or sexual abuse or even of emotional abuse alone. Mental health outcomes of abuse have also been noted to be cumulative over time and with additional exposures to abuse (Blasco-Ros, Sánchez-Lorente, & Martinez, 2010; Lau, Keung Wong, & Chan, 2008; Lindhorst & Oxford, 2008), so it is possible that this study might not have found some of the associations that are reported in

other studies as the study participants were young women and not enough time might have passed for the impact of abuse to accumulate.

This study has shown that IPV in young rural women in South Africa is a significant problem. The prevalence of lifetime abuse reported here is higher than estimates reported in other international studies investigating intimate partner violence, which comprises of mainly dating violence, in adolescents. Notably, however, very few studies have looked at all three forms of abuse (Glass, et al., 2003; Raiford, Wingood, & DiClemente, 2007). Studies have often considered the experience of physical and sexual abuse in relation to health outcomes but this study has shown a much stronger effect with combined forms of abuse. This may be as a result of emotional abuse acting as a driving factor, as appears to be the case with suicidality, or it may point to a broader, more frequent and sustained pattern of abuse as opposed to isolated events (Dunkle, et al., 2004).

This study has some limitations. The conceptualisation of emotional abuse in this measure was limited to five aspects. Other authors, including researchers in South Africa, have drawn attention to many other aspects of emotional abuse, such as being thrown out of home, having belongings destroyed, being deliberately made aware of other partners or witnessing sex with them, not being given money for the home and having earnings taken (R Jewkes, Penn-Kekana, Levin, Ratsaka, & Schrieber, 1996). It is possible that had emotional abuse been measured more broadly, the associations with health outcomes would have differed. A decision was made in designing the study to include these five aspects in order to gain comparability with the WHO multi-country study findings. The cross-sectional design limits the exploration of the hypothesis, as temporality between IPV and the health outcomes cannot be assessed. The data collection was very detailed but it still possible that there may have been measurement bias in the recording of exposure, outcome or confounders. The study team attempted to reduce the measurement error and bias by using well-validated tools that had been previously used in similar settings and in the country. However, experience of abuse and health outcomes was self-reported. Attempts were made to reduce underreporting by using same sex and age interviewers and conducting interviews in the private area away from the home situation. The field-workers were also well-trained and constantly supervised to ensure completeness and accuracy during data collection.

Recall bias was also a potential problem in this study but the women were generally young and would only need to recall few years in a relationship. We also examined the relationship between these same health outcomes and the experience of abuse in the previous year only, where one would expect better recall, and there were no substantial differences in the findings. A further limitation is that participants were recruited through a volunteer process and this may have lead to some selection bias as youth with a greater interest in HIV or sexual health might have been more likely to volunteer. However, this was unlikely to bias the findings here as neither violence nor mental health were a focus of recruitment efforts. Finally, the original study was not powered to measure some of the research questions being tested here and the small sample sizes for some of the health outcomes resulted in large confidence intervals and may limit the interpretation of the findings.

CONCLUSION

This study has shown that emotionally abused young women had a greater risk of suicidality than those experiencing no abuse and that the combined lifetime experience of emotional with physical and/or sexual abuse by an intimate partner was strongly associated with poor mental health outcomes. This is important as there is little published research on lifetime experience of emotional abuse and its relationship with mental health outcomes, either independent of other forms of abuse or in combination. Women who experience emotional

abuse within an intimate partnership should therefore be carefully monitored, especially in terms mental health outcomes, with screening for suicidal tendencies. Screening for IPV is essential to identify women suffering from abuse so that preventive and support strategies can be implemented. Efforts to identify and respond to women who experience abuse by an intimate partner, particularly those being introduced in health services (Christofides & Jewkes, 2010), need to include questions that capture women's experience of emotional abuse as well as physical and sexual abuse. In addition, services should be aware that combination lifetime exposure is an indicator for greater risk of having poorer mental health outcomes.

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Figure 1.

Overlap of intimate partner abuse ever experienced (N=1293)

Key: EA: Emotional abuse, PA: Physical abuse, SA: Sexual abuse, E&PA: Emotional and physical abuse, E&SA: Emotional and sexual abuse, P&SA: Physical and sexual abuse, EP&SA: Emotional, physical and sexual abuse.

Table 1

Sociodemographic and clinical characteristics of ever-partnered women according to categories of abuse, Eastern Cape (N=1293)

Characteristics	Total	Categories of abuse* n (%) /mean (SD)			
		No abuse (N=594)	EA only (N=189)	P &/or SA (N=144)	P &/or S & EA (N=366)
Demographic					
Age (in years) [mean (SD)]	18.2 (1.6)	18.1 (1.4)	18.3 (1.5)	18.6 (2.0)	18.2 (1.6)
Completed years of education [mean (SD)]	8.9 (1.4)	8.6 (1.5)	9.1 (1.3)	8.9 (1.6)	9.1 (1.3)
Socioeconomic status factor score [mean (SD)]	0.1 (1.4)	0.4 (1.3)	0.0 (1.5)	0.1 (1.0)	-0.2 (1.6)
Home without television [n (%)]	670 (51.8%)	319 (53.7%)	95 (50.3%)	93 (64.6%)	1633 (44.5%)
Home without car [n (%)]	1010 (78.1%)	473 (79.6%)	136 (72.0%)	112 (77.8%)	289 (21.0%)
People at home often/sometimes go hungry [n (%)]	403 (31.2%)	121 (20.4%)	78 (41.3%)	33 (22.9%)	171 (46.7%)
People at home often/sometimes have no meat [n (%)]	673 (52.1%)	282 (47.5%)	101 (53.4%)	102 (70.8%)	188 (51.4%)
Very/quite difficult to find R100 for medical emergency [n (%)]	712 (55.1%)	278 (46.8%)	126 (66.7%)	64 (44.4%)	244 (66.7%)
Childhood adversity factor score [mean (SD)]	0.1 (1.0)	-0.1 (0.8)	-0.0 (0.7)	0.3 (1.5)	0.5 (1.2)
Told that she was lazy/stupid/ugly by someone in her family [n (%)]	499 (38.6%)	199 (33.5%)	43 (22.8%)	69 (47.9%)	188 (51.4%)
Punished at home by being beaten [n (%)]	1116 (86.3%)	497 (83.7%)	178 (94.2%)	103 (71.5%)	338 (92.4%)
Someone touched her thighs, buttocks, breasts or genitals when she did not want him to or made her touch his private parts when she did not want to [n (%)]	285 (22.0%)	100 (16.8%)	58 (30.7%)	47 (32.6%)	80 (21.9%)
Mental health outcomes					
Hazardous drinking behaviour [n (%)]	20 (1.6%)	2 (0.3%)	1 (0.5%)	4 (2.8%)	13 (3.6%)
Any illicit drug use [n (%)]	46 (3.6%)	9 (1.5%)	4 (2.1%)	5 (3.5%)	28 (7.7%)
Elevated depressive symptoms [n (%)]	254 (19.6%)	79 (13.3%)	20 (10.6%)	14 (9.7%)	141 (38.5%)
Current psychological distress [n (%)]	390 (30.2%)	148 (24.9%)	42 (22.2%)	25 (17.4%)	175 (47.8%)
Current suicidality [n (%)]	72 (5.6%)	2 (0.3%)	18 (9.5%)	2 (1.4%)	50 (13.7%)

Key: EA only: Emotional abuse only, P &/or SA: Physical and/or sexual abuse, P &/or SA & EA: Physical and/or sexual abuse, and emotional abuse

Table 2
Associations between experiencing different forms of lifetime abuse and mental health outcomes in ever-partnered women (N=1293)

	Hazardous drinking behaviour [*]	Drug use [*]	Elevated depressive symptoms [*]	Psychological distress [*]	Suicidality [*]
UOR (95% CI) p value					
No abuse	1	1	1	1	1
EA	1.5 (0.1 – 17.0)	1.8 (0.5 – 6.2)	0.7 (0.4 – 1.2)	0.8 (0.6 – 1.3)	71.7 (15.8 – 325.2)
PA and/or SA	6.5 (1.1 – 37.0)	2.3 (0.7 – 7.1)	0.7 (0.4 – 1.3)	0.6 (0.4 – 1.0)	5.1 (0.7 – 37.9)
PA and/or SA & EA	8.6 (1.9 – 39.6)	6.0 (2.7 – 13.2)	4.0 (2.9 – 5.5)	2.7 (2.0 – 3.6)	106.8 (25.0 – 456.2)
AOR (95% CI) p value					
No abuse	1	1	1	1	1
EA	1.3 (0.1 – 15.9)	1.7 (0.5 – 5.8)	0.6 (0.4 – 1.1)	0.8 (0.5 – 1.2)	79.5 (16.7 – 377.4)
PA and/or SA	6.0 (1.0 – 36.6)	2.2 (0.7 – 6.9)	0.6 (0.3 – 1.1)	0.4 (0.3 – 0.7)	4.2 (0.5 – 36.2)
PA and/or SA & EA	5.8 (1.1 – 29.4)	5.6 (2.4 – 12.6)	2.9 (2.1 – 4.2)	1.9 (1.4 – 2.6)	79.0 (17.3 – 359.6)

Key: UOR: Unadjusted odds ratio, AOR: Adjusted odds ratio.

* In the adjusted model, controlled for age, education, socio-economic status, and childhood adversity