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Jill S. Levenson, Gwenda M. Willis and David S. Prescott

*Sex Abuse* published online 10 September 2014

DOI: 10.1177/1079063214544332

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What is This?

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Sexual Abuse: A Journal of  
Research and Treatment  
1–26

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DOI: 10.1177/1079063214544332

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## Abstract

This study explored the prevalence of early trauma in a sample of U.S. female sexual offenders ( $N = 47$ ) using the Adverse Childhood Experiences (ACE) scale. Compared with females in the general population, sex offenders had more than three times the odds of child sexual abuse, four times the odds of verbal abuse, and more than three times the odds of emotional neglect and having an incarcerated family member. Half of the female sex offenders had been sexually abused as a child. Only 20% endorsed zero adverse childhood experiences (compared with 35% of the general female population) and 41% endorsed four or more (compared with 15% of the general female population). Higher ACE scores were associated with having younger victims. Multiple maltreatments often co-occurred in households with other types of dysfunction, suggesting that many female sex offenders were raised within a disordered social environment by adults with problems of their own who were ill-equipped to protect their daughters from harm. By enhancing our understanding of the frequency and correlates of early adverse experiences, we can better devise trauma-informed interventions that respond to the clinical needs of female sex offender clients.

## Keywords

child sexual abuse, female sexual offenders, adverse childhood experiences, trauma-informed care, treatment

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Female-perpetrated sexual offending is not a statistical anomaly. Some estimates from victim surveys suggest that 14% to 24% of male child victims and 6% to 14% of abused girls were sexually abused by a female (Green, 1999). Another study found that as many as 39% of men and 6% of women reported being sexually abused in childhood by a female perpetrator (Dube et al., 2005). Yet, female sexual offenders comprise only 2% to 5% of sexual offenders in the criminal justice system (Cortoni & Hanson, 2005; Cortoni, Hanson, & Coache, 2009; Greenfeld & Snell, 2000) and about 2% of sex offenders on public registries in the United States (Ackerman, Harris, Levenson, & Zgoba, 2011). There are many reasons why female-perpetrated offenses might not come to the attention of criminal justice authorities, including victim perceptions of stigma, the belief that abuse by females is less harmful, or victims' fears of not being believed. In some countries, including the United Kingdom, legal definitions (e.g., requiring penile penetration) do not allow for women to be convicted of rape (Fisher & Pina, 2013). Researchers and clinicians, however, have recognized the scope and significance of sexual offending by females, and research in this area has gained momentum over the past decade. An emerging area of inquiry in the research literature is the presence of gender-specific factors in the etiology and treatment of sexual offending in females.

Adverse childhood experiences have been highlighted as possible contributing factors in sexual offending behaviors. In the general population, child maltreatment and early household dysfunctions are associated with poorer outcomes in adulthood, including physical health, mental health, and high-risk behavior (Anda et al., 2006; Felitti et al., 1998). These factors, particularly childhood sexual abuse, are elevated in samples of sexual offenders when compared with non-sexual criminals (Jespersen, Lalumière, & Seto, 2009) and to males in the general population (Levenson, Willis, & Prescott, 2014; Reavis, Looman, Franco, & Rojas, 2013). The majority of male sexual offenders report at least one adverse childhood experience and nearly half report four or more (Levenson et al., 2014; Reavis et al., 2013). The current study explores the prevalence of different types of childhood adversity, cumulative experiences of childhood adversity, and relationships between adverse childhood events and offense characteristics in a sample of females in treatment for committing sexual offenses.

## **Adverse Childhood Experiences in the General Population of Females**

In one of the largest studies examining childhood adversity in the general population to date, 17,337 members of a health insurance program in the United States (54% female) completed the Adverse Childhood Experiences (ACE) scale (Felitti et al., 1998). The 10-item ACE scale assesses the presence or absence of *abuse* (emotional, physical, and sexual), *neglect* (emotional and physical), and *household dysfunction* (domestic violence, divorce, and the presence of a substance-abusing, mentally ill, or incarcerated member of the household). One's ACE score reflects the total number of adverse childhood experiences endorsed by the individual. This study provided

staggering evidence of the frequency of maltreatment and family dysfunction in American households.

Women were more likely to report a history of sexual (25%) and emotional (13%) abuse than men (16% and 8%, respectively), though men were slightly more likely to have been physically abused (30% vs. 27%; Centers for Disease Control and Prevention [CDC], 2013b). As well, women were more likely to have been emotionally neglected, witnessed domestic violence, and to have had a substance-abusing or mentally ill parent. Adverse childhood experiences commonly co-occurred; having experienced one adverse event significantly increased the odds of experiencing additional adverse events. Overall, women endorsed a greater number of adverse childhood experiences than men: More than one quarter (25.5%) of females had a score of three or greater, compared with 17.8% of males (CDC, 2013b). These statistics might underestimate actual prevalence rates, given that the sample underrepresented ethnic minorities and individuals from lower socioeconomic classes. Nevertheless, studies using nationally representative samples have produced similar findings (Black et al., 2011; Finkelhor & Dzuiba-Leatherman, 1994; MacMillan et al., 1997).

A goal of the ACE research was to explore relationships between early adversity and adult health, mental health, and high-risk behaviors. As ACE scores increased, so did the likelihood of adulthood alcohol and drug abuse, smoking, pulmonary disease, depression, suicide attempts, fetal death, obesity, heart disease, liver disease, intimate partner violence, early initiation of sexual activity, promiscuity, sexually transmitted diseases, and unintended pregnancies (CDC, 2013a; Felitti et al., 1998). The collective impact of early trauma on behavioral, medical, and social well-being has consistently proven to be robust and the implications for public health are profound (Anda, Butchart, Felitti, & Brown, 2010; Felitti et al., 1998b).

## **Adverse Childhood Experiences in Female Criminal Offenders**

Interestingly, however, few studies have examined the role of early trauma in criminal behavior, particularly with females. In a large study involving the records of hundreds of thousands of inmates and probationers in the United States, Harlow (1999) examined the prevalence of early maltreatment and found that 36.7% of female state inmates and 36.6% of jail inmates reported sexual or physical abuse before 17 years of age. The ACE questionnaire was not used, but rather researchers utilized historical reports of pertinent abuse variables. Past abuse was associated with a greater likelihood of an index violent offense, and household dysfunction commonly co-occurred with child abuse. Of state inmates who were placed in foster homes or institutional care as children, 87% of females and 44% of males reported childhood physical or sexual abuse. Similarly, of prisoners who reported that a parent or caretaker drank heavily or used drugs, 29% of male inmates and 76% of females reported early abuse. Harlow's study began to identify the elevated rates of adversity in female offender populations compared with both male inmates and rates found in the general population reported by the CDC (2013b).

In a national examination of hundreds of thousands of female U.S. probationers and prisoners, 44% reported that they were physically or sexually assaulted at some time during their lives, with 69% of those saying the assault had occurred before age 18 (Greenfeld & Snell, 2000). More recently, Messina, Grella, Burdon, and Prendergast (2007) investigated the prevalence of adverse childhood experiences in female drug-dependent prisoners ( $N = 315$ ). Using a tool similar to the ACE scale, 39% reported experiencing sexual abuse before 16 years of age, 29% reported experiencing physical abuse, and 39.8% reported emotional abuse and neglect. Household dysfunction including family violence (46%), parental separation or divorce (42%), incarceration of a family member (30%), and parental substance abuse (44%) were also common. More than half of the female offenders (53%) reported three or more adverse childhood events, including 22% who reported five or more. Even higher rates of childhood adversity were found in a sample of 100 girls (12-18 years old,  $M = 16$  years) recruited from juvenile justice settings in South Carolina, United States (DeHart, 2009). Caregiver violence (physical abuse, psychological abuse, and neglect) was reported by 69% of participants, and sexual violence (including statutory rape) was reported by 81% of the girls. In addition, participants reported experiencing a median of three non-victimization adverse events, of which the most prevalent was the death or serious illness of a close friend or family member (84%). Taken together, these findings emphasize that child abuse and family dysfunction are rarely experienced in isolation and that females are especially prone to multiple adversities early in life.

Prospectively collected data from the Chicago Longitudinal Study ( $n = 1,539$  low-income minority children) highlighted child maltreatment as a predictor of criminal behavior for both boys and girls (Mersky, Topitzes, & Reynolds, 2012) but emphasized that different gender pathways exist (Topitzes, Mersky, & Reynolds, 2011, 2012). The authors suggested that clinical assessments and interventions should incorporate a focus on maltreatment history and that service delivery should target the effects of childhood trauma. Results of a differently designed longitudinal study also tested the theory of a cycle of violence by comparing the arrest records of abused and/or neglected children with arrest records for children who were not maltreated (Widom & Maxfield, 2001). The authors found that childhood abuse or neglect increased the likelihood of a juvenile arrest by 59%, an adult arrest by 28%, and a violent crime by 30% (Widom & Maxfield, 2001).

A history of child abuse seems to foretell not only criminal behavior but also mental and personality disorders. For instance, two thirds of 142 inmates incarcerated at a women's state prison in the United States reported sexual maltreatment, 78% reported that they had been physically abused by a maternal caretaker, and 93% reported verbal abuse by a female caretaker (Loper, Mahmoodzadegan, & Warren, 2008). Many also reported physical abuse by male caregivers. Sexual maltreatment was most frequently committed by a relative, often a paternal figure, and nearly half of the inmates who said they had disclosed sexual abuse in childhood reported that they were either ignored or not believed. Women who suffered greater severity and variety of physical and psychological maltreatment were more likely to be diagnosed with *Diagnostic and Statistical Manual of Mental Disorders (DSM)* Cluster B personality pathology.

Betrayals and invalidating experiences can exacerbate the effects of child abuse and seem to contribute to the disorganized attachment and emotional dysregulation that characterize Cluster B personality traits (Loper et al., 2008).

Studies differ in their findings due to varying definitions of childhood adversity, sample size, comparison groups, and data collection methods (e.g., file review, interview, and/or self-report). Moreover, the various ways that questions about abuse are asked can lead to different research findings (Simons, 2007). For example, some offenders may fabricate or embellish stories of abuse with hopes of reducing their own culpability, while others describe experiences not perceived as abusive but that might be defined as such by clinicians or researchers. Nevertheless, it is clear that adverse childhood experiences are more prevalent in female offender samples compared with females in the general population and that cumulative trauma increases the likelihood of medical and psychosocial troubles in adulthood.

## **Adverse Childhood Experiences in Female Sexual Offenders**

The traumatic histories of female sex offenders using the ACE questionnaire have not received much attention in the research literature, and other measures of child maltreatment are more common. Wijkman, Bijleveld, and Hendriks (2010) investigated victimization histories from official records of all female sexual offenders known to criminal justice authorities in the Netherlands between 1994 and 2005 ( $N = 111$ ). Approximately two thirds had acted with a co-offending male, most often the woman's husband or intimate partner. Most (77%) offended against children, and one third abused their own child. Approximately one third had a documented history of emotional neglect, 16% had a history of physical and/or psychological abuse, and 31% had a history of sexual abuse. Relative to rates reported in other female offender samples, the comparatively lower rate of sexual abuse might reflect methodological differences between studies (coding official file information vs. interviews), definitional nuances, or cultural differences.

Gannon, Rose, and Ward (2008) examined background factors of 22 female sexual offenders recruited from prison and probation sites in the United Kingdom and found that early trauma was prominent: 36% of participants reported childhood sexual abuse and 64% reported childhood physical abuse and/or witnessing domestic violence. In a sample of 90 female sex offenders from Texas, the majority (69%) experienced childhood sexual abuse (Turner, Miller, & Henderson, 2008). Measures of psychopathology suggested three offender subtypes: one with subclinical psychopathology levels but with elevated substance abuse problems, a second group at high risk for borderline personality disorder, and a third, smaller group of severely disturbed individuals (Turner et al., 2008). In a U.S. study of 15 females convicted of sexual offenses and referred to a psychiatric facility for competency to stand trial evaluations, 60% reported a history of child sexual abuse (Lewis & Stanley, 2000). Another study explored victimization history in 13 adult females and 15 juvenile females referred to a specialized outpatient clinic for treatment of sexually abusive behavior in Montréal, Canada. More

than 61% of the adult participants and 60% of the juvenile participants reported prior sexual abuse, and most (50% adults, 77.7% juveniles) reported that they were first abused before their 12th birthday (Tardif, Auclair, Jacob, & Carpentier, 2005). Similarly, in a U.S. study, Mathews, Hunter, and Vuz (1997) found that 77.6% of 67 juvenile females referred for sexual offending treatment reported a history of sexual abuse. Female participants also reported a greater number of abusers than males ( $M = 4.5$  vs. 1.4), an earlier age of first abuse, and higher rates of physical abuse compared with males (Mathews et al., 1997).

Other studies have compared trauma histories between female sexual offenders and female non-sex offenders. Christopher, Lutz-Zois, and Reinhardt (2007) compared the self-reported sexual abuse histories of 61 female sex offenders and 81 female non-sex offenders. The female sex offenders reported more frequent and prolonged childhood sexual abuse than the female non-sex offenders. Strickland (2008) compared 60 female sex offenders and 70 female non-sex offenders on exposure with different types of trauma and found that females incarcerated for sexual offenses reported significantly greater overall exposure to trauma as well as significantly higher rates of childhood sexual abuse, physical abuse, emotional abuse, and physical neglect.

Emerging research suggests that different subtypes of females who have sexually abused might have different trauma histories. Wijkman, Bijleveld, and Hendriks (2011) identified three subgroups of female sexual offenders based on their analysis of criminal histories of female sexual offenders in the Netherlands ( $N = 135$ ). Generalists (27%) showed a pattern of criminal diversity including sexual offending and other violent offending; these women were likened to general antisocial offenders and adult male rapists. Specialists (57%), by contrast, generally showed a pattern of multiple sexual offenses and few, if any, other offenses; these women were likened to male child molesters. The remaining 16.3% were once-only offenders (which were not classified as specialists or generalists). Victim characteristics differed between subgroups: Specialists were more likely than the other subgroups to offend against victims of both sexes and against victims they were acquainted with. Victimization history also differed as a function of subgroup: Specialists were more likely to have a sexual abuse history; generalists were more likely to have a physical abuse history. In addition, specialists were more likely to co-offend with an intimate partner than generalists, perhaps suggesting a tendency toward domestic violence victimization and/or dependency in relationships.

## **The Role of Childhood Adversity in Criminal Offending**

The cumulative stress of childhood adversity leads to social, emotional, and cognitive impairment, and traumatized individuals often adopt high-risk behaviors as part of a continuum of maladaptive coping strategies. Such behaviors, in turn, can contribute to higher rates of medical, mental health, and psychosocial problems in adulthood (Felitti, 2002; Felitti et al., 1998). Early stressors stimulate the overproduction of stress-related hormones associated with hyperousal and anxiety, inhibiting the growth and connection of neurons and contributing to deficits in affect



regulation, social attachments, and cognitive processing (Anda et al., 2010; Anda et al., 2006; Creeden, 2009). When traumatic experiences are denied or invalidated by caretakers, abusers, helping professionals, or victims themselves, traumatic stress cannot be processed effectively and negative impacts may be further exacerbated (Whitfield, 1998).

Abusive relationships are characterized by betrayal at the hands of a trusted person (often a caregiver), violation of hierarchical boundaries, keeping of secrets, and distortion of reality in a way that reinforces the values, beliefs, and behaviors of the abuser (Elliott, Bjelajac, Fallot, Markoff, & Reed, 2005; M. E. Harris & Fallot, 2001; Teyber & McClure, 2011). In adverse environments, the victim feels helpless to alter or leave the relationship, and disempowering dynamics shape an individual's expectations of themselves, others, and the world around them (M. E. Harris & Fallot, 2001). Inadequate parental nurturance, guidance, or protection can lead to mistrust, hostility, and insecure attachment, which can promote development of social deficits, loneliness, negative peer interactions, or delinquent behavior (Bloom & Farragher, 2013; Hanson & Morton-Bourgon, 2005; M. E. Harris & Fallot, 2001). Pervasive intimacy deficits in early family dynamics can result in adult relational patterns that may be impersonal, selfish, and even adversarial, and these can contribute to criminality and sexually abusive behaviors (Hanson & Morton-Bourgon, 2005).

For many female offenders, early adversity has shaped the pathway to criminal behavior; when teens leave home to escape violent and dysfunctional households, prostitution, drug abuse, and property crimes can then become a way of life (Covington & Bloom, 2007). After fleeing childhood abuse, family dysfunction, and poverty, women often live with economic deprivation, raising the risk for substance addiction, association with violent men, and survival behaviors that bring them in contact with the criminal justice system (Covington, 2007; Covington & Bloom, 2007; Mersky et al., 2012; Topitzes et al., 2011). The extant research suggests that female sexual offenders experience more prominently traumatic childhoods compared with female non-sex offenders and females in the general population. Several authors have highlighted a need to better understand the victimization histories of female sex offenders to enhance knowledge about the etiology of sexual offending and to help inform treatment efforts (e.g., Covington, 2007; Covington & Bloom, 2007; Rousseau & Cortoni, 2010; Topitzes et al., 2011). Chief among these goals is how best to provide differential diagnosis and integrated treatment in cases where women have experienced complex developmental trauma as children (Covington & Bloom, 2007; Streeck-Fischer & van der Kolk, 2000).

## **Purpose of the Study**

The purpose of this study is to examine the prevalence and impact of adverse childhood experiences in the lives of female sexual offenders using the ACE questionnaire, which has not been previously explored in the research literature. First, we will

identify the frequency of early ACE in the female sex offender sample and compare it with known rates of ACE for U.S. females to determine whether significant differences exist. It is hypothesized that female sex offenders will have higher rates of child maltreatment and family dysfunction than females in the general population. Then, correlations between ACE items will be examined. It is hypothesized that multiple forms of early adversity will be interrelated. Finally, associations between individual ACE items, total ACE score, and offense characteristics will be explored. It is expected that the accumulation of traumatic events will be associated with increased deviant and criminal behavior.

## Method

### *Participants*

A convenience sample of participants was surveyed in outpatient and secure sex offender treatment programs across the United States. The programs were recruited through a solicitation on the professional listserv of the Association for the Treatment of Sexual Abusers. This sampling strategy was chosen due to limitations around funding, as well as the belief that clients might be more likely to participate if invited by their own therapist rather than by receiving a direct solicitation from an unknown researcher. Therapists who responded to the solicitation agreed to become data collection sites, and, in turn, they invited their clients to participate in the survey. Most outpatient programs serve clients who have been ordered to attend treatment by the court as part of their probation requirements following a criminal conviction, or as part of their Family Court plan following a finding of sexual abuse in a child protective services investigation. Participating programs were located in Arizona, New Jersey, Illinois, Texas, Florida, Georgia, Maryland, Montana, Washington, and Maine. All clients attending treatment at the outpatient or secure facilities ( $N =$  approximately 970) were invited to participate in the project, and a total of 709 clients voluntarily agreed to participate. Thus, the response rate was approximately 73%. The male participants were excluded from these analyses, and those data have been reported elsewhere (Levenson et al., 2014).

The sample for the current study consisted of 47 adult female sex offenders. Sample demographics are described in Table 1. The majority of participants were White (76%), and most (66%) were between 30 and 60 years of age, with 30% under age 30 (8.5% were 18-25) and less than 5% over age 60. Approximately 53% of the sample had completed high school or obtained a Graduate Equivalency Diploma (GED), and 30% identified themselves as college graduates. About 58% earned less than US\$30,000 per year in the last year they earned income. Less than one third of the sample had never been married, 15% were currently married, and 53% were divorced or separated.

Table 2 describes participant, offense, and victim characteristics. Participants had been arrested for a variety of sexual crimes; 95% reported that their index offense involved sexual contact with a minor. One of the 47 females said she had been arrested

**Table 1.** Sample Demographics.

Demographic categories	Percent (N = 47)
Race	
White	76
Minority	24
Age (years)	
18-25	8.5
26-30	21
31-40	28
41-50	30
51-60	8.5
Over 60	4.3
Marital status	
Never married	30
Married	15
Divorced/separated	53
Widowed	2
Education	
Not high school graduate	17
High school graduate or GED	53
College graduate or higher	30
Income	
Under US\$20,000	32
US\$20,000-US\$29,999	26
US\$30,000-US\$49,999	28
US\$50,000+	14

Note. GED = Graduate Equivalency Diploma.

for a child pornography offense, one for Internet solicitation, and one for exposure of genitals. Participants were asked a series of questions about victim characteristics, taking into account their index offending, any prior offending, and any undetected offending. Most participants reported that they had offended against female victims (58%), 11% reported that they had victimized a stranger, and 43% said they offended against pre-pubescent children, with 9% reporting a victim 5 years old or younger (percentages do not add up to 100% because some endorsed multiple categories). Most participants (89%) reported that they had been arrested only once for a sex crime, and only four individuals had been arrested 2 times or more. The vast majority (80%) reported no history of a non-sex arrest. In general, this sample was made up of first-time offenders with very little self-reported history of criminality or violent behavior. Participants were asked to disclose their total number of victims (including offenses they had not been arrested for) and reported a median number of one victim (mode = 1,  $M = 1$ , range = 0-6).

**Table 2.** Offender, Offense, and Victim Characteristics.

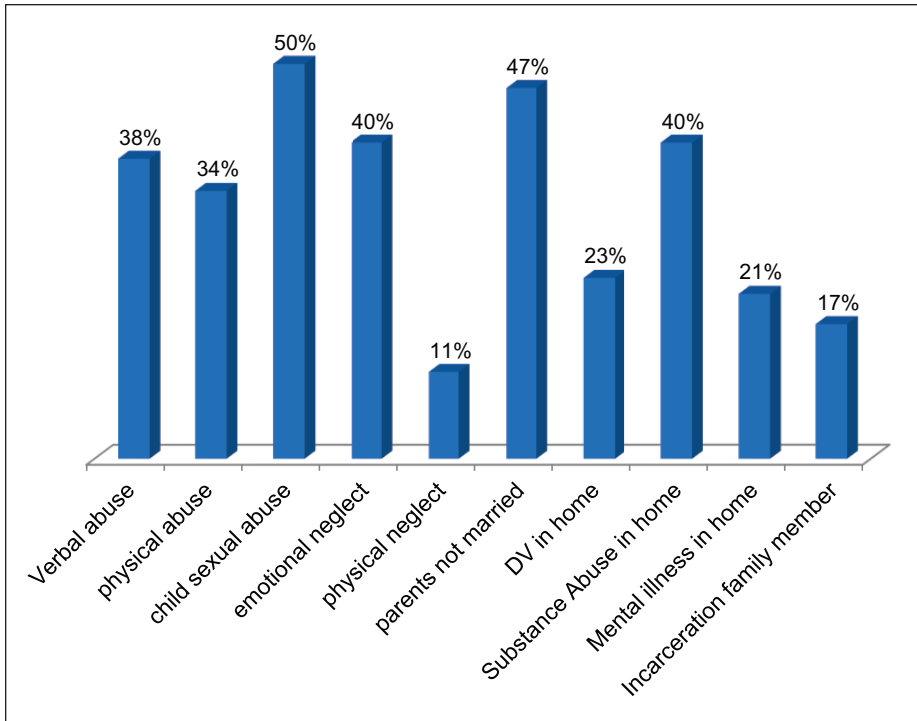
	Valid N	M/%	Median	Mode
Female victim	45	58%		
Male victim	45	42%		
Family victim	45	40%		
Unrelated victim	45	53%		
Stranger victim	45	11%		
Victim 5 years old or younger	44	9%		
Victim 6-12	44	34%		
Victim minor teen	45	52%		
Victim 18+	44	5%		
Ever used force	46	4%		
Ever used weapon	46	0		
Ever caused injury	45	2%		
Total sex crime arrests	46	1.1	1	1
Total victims	44	1.4	1	1
Total non-sex arrests	46	<1	0	0
Months in Treatment	41	39	39	16
Lifetime months in prison	46	47	27	0
Lifetime months on probation	40	20	0	0

Note. Percentages may not add up to 100% because some categories were not mutually exclusive.

### Instrumentation

A survey was developed by the principal investigator for the purpose of collecting data on the prevalence of early trauma. The first section of the survey consisted of the Adverse Childhood Experiences (ACE) scale (CDC, 2013b), a 10-item dichotomous scale in which participants endorse whether or not they experienced specific types of maltreatment and household dysfunction prior to 18 years of age: *abuse* (emotional, physical, and sexual), *neglect* (emotional and physical), and *household dysfunction* (domestic violence, divorce, and the presence of a substance-abusing, mentally ill, or incarcerated member of the household). The survey items can be seen in the appendix. One's ACE score reflects the total number of adverse experiences endorsed by that individual. The ACE categories were developed using items adapted from earlier studies: the Conflict Tactics Scale (Straus, Gelles, & Smith, 1990), the Child Trauma Questionnaire (Bernstein et al., 1994), and questions from a survey about sexual abuse (Wyatt, 1985).

The second section of the survey asked questions about offense history using forced-choice categorical responses to ensure anonymity. Questions about the nature of the sex offenses committed were asked, such as victim age, gender, and relationship, as well as the number of prior arrests. No information that could potentially identify offenders or victims was sought.



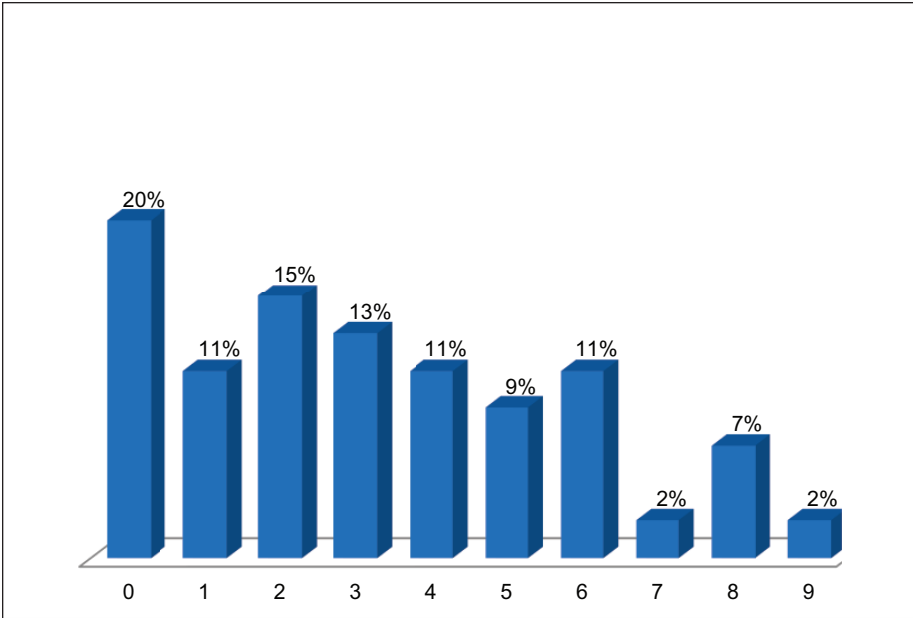
**Figure 1.** Percentage of female sex offenders endorsing ACE items (n = 46).  
Note. ACE = Adverse Childhood Experiences.

### Data Collection

Federal guidelines for human subject protection were followed and the project was approved by an Institutional Review Board. Clients were invited to complete the anonymous survey during regularly scheduled group therapy sessions at participating data collection sites. Clients were instructed not to write their names on the survey and to place the completed survey in a sealed box with a slot opening. Thus, data were collected anonymously to ensure the confidentiality of the participants. No identifying information about the participants or their victims was collected to avoid any incrimination related to acknowledgment of past crimes.

### Analyses

Descriptive statistics are reported for each of the survey items. Binomial analyses and odds ratios were used to examine differences between groups, and bivariate correlations were used to examine relationships between variables.



**Figure 2.** Distribution of ACE scores ( $n = 46$ ).

Note. ACE = Adverse Childhood Experiences.

## Results

Figure 1 depicts the proportion of participants endorsing “yes” to each ACE item. Child maltreatment and household dysfunction were common among these women, with about one third saying they had endured physical abuse in childhood ( $n = 16$ ), 38% reporting verbal abuse ( $n = 18$ ), 40% reporting emotional neglect ( $n = 19$ ), and 11% reporting physical neglect ( $n = 5$ ). Half ( $n = 23$ ) had been sexually abused. Household dysfunction was also common; nearly half ( $n = 22$ ) grew up in a home where their parents were not married, nearly a quarter ( $n = 11$ ) witnessed domestic violence, 40% ( $n = 19$ ) had a substance-abusing parent, 21% ( $n = 10$ ) had a parent or caretaker who experienced mental illness or attempted suicide, and 17% ( $n = 8$ ) had a family member who was incarcerated. One in five said that they experienced no adverse childhood experiences, and 41% endorsed four or more (see Figure 2). The mean ACE score was 3.2 (median = 3,  $SD = 2.58$ ).

Table 3 shows the proportion endorsing each item compared with the prevalence in the original CDC female sample. In each category, the female sex offenders reported higher prevalence rates than the general female population, with one exception: mental illness in the home (this difference was not significant). Binomial tests revealed that most of the other differences between groups were statistically significant, except for the prevalence of physical abuse and physical neglect (see Table 3). As noted above, 41% had an ACE score of four or higher, compared with 15% of the females in the CDC study.

**Table 3.** ACE Item Comparisons and Odds Ratios Between Female Sex Offenders and Females in CDC Sample, and Between Female Sex Offenders and Male Sex Offenders (Percentage Endorsing “Yes” to each item).

ACE category	% female SO sample (N = 47)	% female CDC sample (N = 9,367)	Odds ratio	% male SO sample (N = 679)	Odds ratio
Verbal/emotional abuse	38*	13	4.07	53	0.54
Physical abuse	34	27	1.39	42	0.71
Sexual abuse	50***	25	3.05	38	1.63
Emotional neglect	40***	17	3.33	37	1.14
Physical neglect	11	9	1.22	15	0.70
Parents not married	47**	25	2.73	54	0.76
DV in home	23*	14	1.88	24	0.95
Substance abuse in home	40***	30	1.59	46	0.78
Mental illness in home	21	23	0.88	26	0.76
Incarcerated household member	17**	5	3.73	23	0.69

Note. SO = sex offender; Frequencies endorsed by the female sex offenders were compared with those observed in the CDC female sample using binomial non-parametric tests. SPSS does not produce coefficients for one-sample binomial tests. For the reader's convenience, ACE item endorsements from a sample of male sex offenders are shown (Levenson, Willis, & Prescott, 2014).

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

Odds ratios (OR) are used to compare the relative odds of the occurrence of an event of interest (e.g., childhood sexual abuse) in one group, compared with the odds of occurrence of the same event in another group (Szumilas, 2010). ORs in the current analysis were calculated as described in the following cogent explanation:

... if 25 out of 100 sex offenders have a history of sexual abuse, their odds of having a sexual abuse history are 25/75, or 0.33; if 10 of 100 of non-sex offenders have a similar history, their odds are 10/90, or 0.11. The OR for this comparison is thus 0.33/0.11, or 3.0. An odds ratio of 1.0 represents the absence of a group difference whereas an odds ratio greater than 1.0 means a greater prevalence of abuse in the first group; an odds ratio smaller than 1.0 means a lower prevalence of abuse in the first group. (Jespersen et al., 2009, p. 182)

In the current analysis, results revealed that female sex offenders were more likely to experience most ACE items compared with females in the general population, except for physical abuse, physical neglect, and mental illness in the home (see Table 3).

ACE item findings for male sex offenders are published elsewhere (Levenson et al., 2014) but for readers' convenience are listed in Table 3. Female sex offenders were more likely than male sex offenders to have experienced sexual abuse and emotional neglect in childhood.

As shown in Table 4, correlations between many ACE items were positive and significant, suggesting that child maltreatment occurs in household environments that have various types of dysfunctions. The strongest correlations between some items corresponded to a large effect size (Cohen, 1988), such as relationships between physical and emotional abuse and neglect, and physical abuse and domestic violence. Other notable relationships were observed as well. For instance, child sexual abuse was significantly related not only to verbal and physical abuse but also to having unmarried parents and substance abuse in the home. Domestic violence and substance abuse were also highly correlated. Mental illness in the home was significantly related only to physical neglect, and having an incarcerated family member was significantly related only to substance abuse.

Relationships between ACE and a number of demographic and victim characteristics were examined. Higher ACE scores were significantly (inversely) correlated with educational attainment,  $r = -.34$ ,  $p < .05$ , but not to lower income or minority status (see Table 5). ACE scores had no significant correlation with the number of sex crime arrests, non-sex arrests, or the number of total victims. Higher mean ACE scores were, however, significantly associated with having victims under 12 years of age,  $r = .43$ ,  $p < .001$ . Verbal abuse was significantly associated with having a family victim and a victim under 12. Sexual abuse, emotional neglect, and substance abuse were significantly related to having a victim under 12. Domestic violence while growing up was significantly related to having a familial victim, as was substance abuse, and having an incarcerated family member was significantly associated with an unrelated victim and a higher number of victims.

## Discussion

These findings revealed that female sex offenders experienced a significantly higher prevalence of most types of early adversity than females in the general population. Female sex offenders had more than three times the odds of having been sexually abused as a child than women in the general population, and they also had higher rates of having been sexually abused than male sex offenders (Levenson et al., 2014). Multiple maltreatments often co-occurred with other types of family dysfunction, suggesting that abuse and neglect thrive within a chaotic social environment in which caretakers with troubles of their own were insufficiently prepared to protect their daughters from various harms. Only 20% of the female sex offenders reported zero adverse experiences, compared with 35% of females in the general population, and 41% reported



**Table 4.** Correlations Between ACE Items.

	Verbal abuse	Physical abuse	Child sexual abuse	Emotional neglect	Physical neglect	Parents not married	DV in home	Substance abuse in home	Mental illness in home	Incarceration family member
Verbal abuse	1									
Physical abuse	.635**	1								
Child sexual abuse	.315*	.325*	1							
Emotional neglect	.689**	.689**	.267	1						
Physical neglect	.296*	.480**	.070	.419**	1					
Parents not married	.226	.136	.393**	.009	.091	1				
DV in home	.392**	.663**	.255	.364*	.461**	.186	1			
Substance abuse in home	.421**	.323*	.397**	.205	.138	.531**	.569**	1		
Mental illness in home	.125	.175	-.105	.101	.326*	.033	.081	-.110	1	
Incarceration family member	-.124	-.086	.000	-.258	-.156	.256	.151	.319*	-.235	1

Note. ACE = Adverse Childhood Experiences.

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

**Table 5.** Correlations Between ACE Items, Total ACE Score, and Sex Crime Characteristics.

	Verbal abuse	Physical abuse	Child sexual abuse	Emotional neglect	Physical neglect	Parents not married	DV in home	Substance abuse in home	Mental illness in home	Incarceration family member	Total ACE score
Female victim	-.169	-.064	-.026	-.129	-.270	-.192	.172	.093	-.084	.162	-.088
Male victim	.076	-.032	.116	-.147	-.159	.102	-.172	-.184	-.024	.073	-.054
Family victim	.299*	.289	.073	.167	0.000	-.036	.380*	.312*	.109	-.024	.290
Unrelated victim	-.282	-.189	-.024	-.236	-.094	.250	-.090	-.012	-.143	.318*	-.095
Stranger victim	.016	-.100	.063	.144	-.125	.236	-.037	.127	-.189	.205	.074
Victim under 12	.393**	.289	.345*	.352*	.144	.236	.274	.312*	-.109	.095	.433**
Teen victim	-.155	-.157	-.156	-.018	-.220	-.154	-.168	-.154	.095	-.243	-.230
Adult victim	-.251	-.227	.000	-.102	-.113	.173	-.183	-.116	-.171	.261	-.133
Total sex crime arrests	.014	-.061	.046	-.089	-.226	.157	.086	-.006	-.010	.136	.018
Total victims	.084	.062	.003	.026	-.253	.113	.100	.226	-.199	.328*	.101
Total non-sex arrests	.135	.020	.048	.207	.216	.194	.099	.213	-.063	.208	.221

Note. ACE = Adverse Childhood Experiences.

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

four or more, compared with 15% in the general female population. The results are similar to recent studies finding that nearly half of male sex offenders had an ACE score of four or more (Levenson et al., 2014; Reavis et al., 2013) and that sex offenders had three times the odds of being sexually abused compared with non-sex offenders (Jespersen et al., 2009) and males in the general population (Levenson et al., 2014).

Half of these female sex offenders reported childhood sexual abuse, a finding worthy of consideration, particularly because little is known about pathways into sexual offending by females (D. A. Harris, 2010). Past research has revealed that child sexual abuse rarely occurs in isolation and that molestation victims are twice as likely to have also suffered other types of maltreatment and family dysfunction (Dong, Anda, Dube, Giles, & Felitti, 2003). Poly-victimization, more severe and frequent abuse, along with younger age at onset and multiple perpetrators, have all been associated with higher trauma scores (Dong et al., 2003; Finkelhor, Turner, Hamby, & Ormrod, 2011). More severe and varied maltreatment is also associated with Cluster B personality pathology; beyond child abuse itself, the betrayal and invalidation that often accompany such experiences contribute to disorganized attachment and emotional dysregulation (Loper et al., 2008). Testing a theory of the impact of betrayal, researchers found that Child sexual abuse (CSA) perpetrated by a caregiver or someone close to the child contributed to significantly higher levels of depression, anxiety, and suicidality (Edwards, Freyd, Dube, Anda, & Felitti, 2012). Regardless of the gender of the perpetrator, the risk for negative outcomes after CSA is profound, but females are identified as abusers more often than might be expected (39% of male victims and 6% of females reported abuse by women; Dube et al., 2005).

We found that higher ACE scores were significantly correlated with having younger victims. The specific items that significantly correlated with young victims were child sexual abuse, emotional neglect, verbal abuse, and substance abuse in the childhood home. We might speculate that a lack of supportive, nurturing, protective caregiving (emotional abuse or neglect) goes along with more chaotic or unavailable parenting (perhaps due to substance addiction). A lack of parental attention and supervision can increase a child's vulnerability to CSA. Being sexually abused in childhood may, in turn, lead to attempts to self-soothe or search for connection with others in sexualized ways, and perhaps to be drawn to relationships with youngsters who may be less likely to be rejecting or emotionally threatening than adults. Early adversity factors may contribute to sexually abusive behavior by females in unique ways and are important for researchers and clinicians to contemplate to formulate effective and individualized interventions. Rather than assuming that having very young victims simply implies extreme sexual deviance, practitioners should consider that sexual abuse may be, for many abusers, an attempt to meet emotional and intimacy needs.

The ACE literature is thus relevant to clinicians treating sexually abusive individuals and can inform our understanding of the development of attitudes and beliefs that contribute to sexually abusive behavior. Chronic trauma lays a foundation for a range of interpersonal problems and maladaptive coping skills stemming from long-standing relational deficits and distorted cognitive schemas about oneself and others

(Elliott et al., 2005; M. E. Harris & Fallot, 2001; Teyber & McClure, 2011). Furthermore, neurobiological responses to trauma can make adapting to new and non-abusive environments even more challenging, and therefore these clients require trauma-informed treatment methods (Bloom & Farragher, 2013; Creeden, 2009; Ford, Fraleigh, Albert, & Connor, 2010; M. E. Harris & Fallot, 2001; Van der Kolk, 2006). When a child's world seems like a treacherous place with few protective or nurturing caregivers, her capacity to trust is compromised, and expectations of others are laced with caution and cynicism. At the same time, a compromised sense of self-efficacy and a lack of confidence in ones' own instincts can lead to poor life choices and associations with unscrupulous peers or abusive partners. Practitioners may assume that clinical features such as flattened affect, hostility, resistance or manipulateness are related to low motivation for change when they may in fact have served as important protective factors in surviving trauma. Under these circumstances, cognitive-behavioral interventions, while helpful, may be necessary but not sufficient for building a more balanced life. Thus, these findings are important in shaping our clinical and policy responses to childhood maltreatment in general and to sexual abuse more specifically.

### *Implications for Trauma-Informed Practice and Policy*

It is important for clinicians to play a role in interrupting the cycle of abuse by all sexual perpetrators. An adverse family environment is a fertile breeding ground for future sexual offending, and our findings suggest that the role of early adversity in the development of female sexual offending is a relevant treatment target. Understanding and resolving the influence of past trauma on daily life is a necessary foundation for building a better future, and unique treatment considerations may exist with female sex offenders. Trauma-informed care (TIC) recognizes the role of traumatic events in the development of high-risk behavior and honors the subjective interpretation of trauma as a central component of the healing process.

TIC differs from trauma resolution therapy; rather than focusing on the details of traumatic experiences, it follows a few simple principles that help create a safe and empowering therapeutic setting (Bloom & Farragher, 2013; M. E. Harris & Fallot, 2001). First, TIC delivers clinical services in a way that recognizes the prevalence of trauma and its impact on behavior across the life span. Second, TIC offers a safe and client-centered environment in which service providers view maladaptive behavior as well-rehearsed coping and survival skills that developed in the context of traumatic experiences and respond in the treatment setting accordingly. Next, TIC seeks to understand the unique meaning attached by clients to early adverse experiences and how they, in turn, impact core schema about oneself and expectations of others. Above all, TIC ensures that all clients are treated with respect and compassion and that disempowering dynamics are not unwittingly repeated in the treatment setting (Covington & Bloom, 2007).

Furthermore, services should be gender responsive and designed to recognize behavioral, social, and etiological differences in criminal pathways for women

compared with men (Bloom & Covington, 2008; Covington & Bloom, 2007; Topitzes et al., 2011). The role of trauma in the evolution of mental health, substance abuse, and relational problems in women's lives is a critical link to devising services that are comprehensive, integrated, and relevant (Covington, 2007; Covington & Bloom, 2007). These interrelated themes need to extend outside of incarceration settings and into community-based service delivery; fundamental needs such as housing, medical and mental health care, child care and parenting services, self-sufficiency, and support systems targeted to the needs of each individual will help improve re-entry outcomes.

Paramount in women's treatment is the relational component emphasizing mutual, empathic, empowering relationships (Covington, 2007). Such descriptors are unlikely to have characterized the early family environments of women who suffered abuse, neglect, or household dysfunction. The therapeutic setting, then, becomes an opportunity to re-create safe and nurturing relationships, which can then become corrective experiences as they provide opportunities for female clients to rehearse new interpersonal skills with others who respond to them with honor and respect. Relational interventions focus on the importance of intimate emotional connections, especially for women, and how deficits in these areas underscore the high price of early trauma. Even for women who endorse ACE scores of 0 or 1 (31% of our sample), trauma-informed and relationally competent treatment can address the distorted thematic belief systems and problematic interpersonal patterns that are so salient in female offender populations (Bloom & Covington, 2008; Covington, 2007; M. E. Harris & FalLOT, 2001; Loper et al., 2008; Teyber & McClure, 2011).

Sex offender treatment programs have often utilized confrontational approaches, though these approaches have little empirical support (Marshall, 2005). Among trauma survivors, confrontation can fuel shame that acts as a treatment-interfering factor. Confrontational methods can replicate early abusive or traumatic experiences and inadvertently reinforce maladaptive coping strategies that once served an important function in a threatening environment. Indeed, even the best-intentioned practitioner can underestimate how subtle power dynamics in the therapeutic relationship can dramatically undermine treatment progress for clients with a history of trauma (Streeck-Fischer & van der Kolk, 2000). Strengths-based approaches that focus on competencies and promote self-reliance are more consistent with trauma-informed and relational models (Covington, 2007; Covington & Bloom, 2007). Finally, treatment methods have often assumed that sexual deviance is at the core of sexual offending, but current research suggests a more complex etiology, as is true for most female offenders (Covington, 2007; D. A. Harris, 2010; Loper et al., 2008).

TIC can be easily woven into common types of treatment programs, including Relapse Prevention, Cognitive-Behavioral therapy, the Good Lives Model, and Risk-Needs-Responsivity principles. When sex offender therapists establish a non-threatening environment that emphasizes self-determination and models respectful interaction, they can foster a corrective emotional experience by which new skills can be learned,

enhanced, practiced, and reinforced (Levenson, 2014). TIC thus helps clients to develop the self-observation skills necessary to improve self-regulatory capacity (Prescott & Wilson, 2013). Furthermore, corrective experiences not only allow for the healing of the soul but also assist the brain to route neural pathways to new behaviors (Creeden, 2009; Wallace, Conner, & Dass-Brailsford, 2011; Whitfield, 1998). TIC provides an innovative model for facilitating change in sex offender populations within a cognitive-behavioral framework. Clinical practice with female sex offenders should emphasize relationally informed treatment that conceptualizes sexually abusive behavior as a syndrome of deficits in the capacity to modulate interactions with others or to utilize a flexible repertoire of coping strategies aimed at ameliorating distress (D. A. Harris, 2010; Loper et al., 2008; Singer, 2013). In sum, simply adding trauma-based components to an existing treatment regimen is not enough. Rather, it is vital to remember that co-morbid clinical disorders are the norm when working with traumatized people and that integrating process-driven therapy can be a central part of the change process (M. E. Harris & Fallot, 2001; Spinazzola, Blaustein, & van der Kolk, 2005).

In terms of policy, American society in particular has strongly emphasized the role of offender punishment and management, often to the exclusion of primary prevention strategies. There is a compelling research literature suggesting that today's children who experience early maltreatment and chronic family dysfunction are more likely than non-abused youngsters to become tomorrow's criminal offenders (DeHart, 2009; DeHart, Lynch, Belknap, Dass-Brailsford, & Green, 2014; Harlow, 1999; Mersky et al., 2012; Topitzes et al., 2012; Widom & Maxfield, 2001). Researchers and clinicians can help change the dialogue by encouraging stakeholders to invest in early prevention programs for at-risk families. While there is little resistance to funding criminal justice initiatives, social services and prevention programs are among the first to be discarded when budgets need to be balanced. This means that victims of sexual abuse often go without therapy and counseling. Child protective services and foster care programs are often underfunded and poorly staffed. Intervention programs for abusive parents are often overlooked in favor of punitive criminal justice responses. Funding social services for abused children and at-risk families is an important step in preventing future sexual violence in our communities.

### *Limitations and Directions for Future Research*

The most salient limitation of this study was the small sample size. Although the sample size allowed us to generate descriptive statistics and make some basic comparisons between groups, it may be difficult to generalize these findings to the overall population of female sex offenders. Furthermore, the findings are specific to female offenders in treatment and may not generalize to those who have not been caught or convicted. The purposive sampling procedure, which relied on convenience, limited the size and diversity of the sample. Given that female sex offenders make up only 2% of the population of registered U.S. sex offenders (Ackerman et al., 2011), it is not uncommon for such samples to be small. Our findings are similar to other analo-

gous studies of female sex offenders and female criminal offenders, lending credibility to the results.

Another limitation is that this study examined only adverse childhood experiences and not the influence of adult traumas that can also result in post-traumatic stress and related mental health and addiction problems. Adult traumas are important areas of further study for purposes of diagnostic refinement and guidance in treatment protocol development. Likewise, we were unable to study the potential interactive effects of resilience and protective factors that might mitigate the impacts of early adversity.

Questions about the reliability of self-reported data are intrinsic in any survey study, and sex offenders in particular may be vulnerable to impression management. Although the survey used in this study was administered anonymously, it is possible that some subjects slanted their responses in biased directions to appear socially desirable or to engender sympathy. On the other hand, some participants might forget, deny, or minimize early adverse experiences. Because some sex offenders may worry about self-incrimination, we made attempts to ensure anonymity through categorical responses. The potential downside of this concession is that some variables may be less precisely measured and therefore not conform to the very best option for statistical analysis. Limitations notwithstanding, these data provide important information about female sex offenders' history of childhood adversity and allow for direct comparisons with females in the general population, which might be considered a strength of this study. There is a need for further investigation of the relationship between ACEs and adult outcomes for female sex offenders. As well, the role of TIC in improving the effectiveness of sex offender treatment should be a priority for future research.

## Summary and Conclusion

Female sex offenders report a higher frequency of adverse childhood experiences than females in the general population. Because a history of trauma can pave the way for problems with attachment, self-regulation, and relationship competence across the life span, trauma-informed models of care should be gender-specific, address relational patterns, and integrate offense-related goals and trauma services (Bloom & Covington, 2008; Covington, 2007; Covington & Bloom, 2007). Deficits in intimacy and self-regulation have been correlated with sex offense recidivism (Hanson & Harris, 2001; Hanson & Morton-Bourgon, 2005), and the stigma following a sexual offense conviction can further compromise opportunities for emotionally intimate relationships and acceptance from others (Seidman, Marshall, Hudson, & Robertson, 1994). Therefore, services that foster connections with others are crucial, especially for women (Covington, 2007). A trauma-informed therapy setting can model safe, empowering, and healthy intimacy while mitigating the loneliness and alienation often felt by female sex offenders. When offenders engage in the therapeutic process and experience an honest connection with others who validate their experience, opportunities exist for developing and practicing intimacy skills relevant to reducing recidivism risk.

## Appendix

### ACE Questionnaire and Variable Constructs.

ACE Questions: While you were growing up, in your first 18 years of life . . .	Variable constructs
Did a parent or other adult in the household often or very often swear at you, insult you, put you down, or humiliate you? Or, act in any way that made you afraid that you might be physically hurt?	Verbal/emotional Abuse
Did a parent or other adult in the household often or very often push, grab, slap, or throw something at you? Or ever hit you so hard that you had marks or were injured?	Physical abuse
Did an adult or person at least 5 years older than you ever touch or fondle you or have you touch their body in a sexual way? Or attempt or actually have oral, anal, or vaginal intercourse with you?	Sexual abuse
Did you often or very often feel that no one in your family loved you or thought you were important or special? Or your family didn't look out for each other, feel close to each other, or support each other?	Emotional neglect
Did you often or very often feel that you didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? Or your parents were too drunk or high to take care of you or take you to the doctor if you needed it?	Physical neglect
Were your parents ever separated or divorced?	Parents not married
Was your mother or stepmother often or very often pushed, grabbed, slapped, or had something thrown at her? Or sometimes often or very often kicked, bitten, hit with a fist, or hit with something hard? Or ever repeatedly hit at least a few minutes or threatened with a gun or knife?	Domestic violence in home
Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?	Substance abuse in home
Was a household member depressed or mentally ill, or did a household member attempt suicide?	Mental illness in home
Did a household member go to prison?	Incarcerated household member

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.



## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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