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The Relationship between Adverse Childhood Experiences, Coping Using Sex, and Adult
Sexual Coercion in Non-Incarcerated, Community-Based Females

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Abstract

Adverse childhood experiences have been associated with negative outcomes in adulthood, including sexual offending. Using a cross-sectional design, we investigated whether self-reported adverse childhood experiences related to the perpetration of coercive sexual acts among 250 females recruited from the community. Furthermore, we examined whether sexualised coping mediated any potential relationship between childhood experiences and sexual coercion. A Spearman's rank order correlation revealed no relationship between adverse childhood experiences and sexual coercion. However, adverse childhood experiences were significantly correlated with sexualised coping, which in turn was correlated with sexual coercion. Additionally, there was a significant but small indirect effect of adverse childhood experiences on sexual coercion through sexualised coping. Findings may help researchers to better understand the causal relationship between childhood experiences, sexual coping, and sexual coercion in females.

Keywords: female sexual offending, sexual offending, adverse childhood experiences, sexual coping, sexual coercion.

Experiencing adverse childhood experiences has been associated with deleterious mental and physical health outcomes (Merrick et al., 2017). It has also been associated with problems with aggression (DeLisi & Beauregard, 2017), violence (Pflugradt, Allen, & Zintsmaster, 2017), hypersexuality (Kingston, Graham, & Knight, 2017), and risky behaviours or dissatisfaction in sexual domains (Anda et al., 2006). Research with victims of childhood sexual abuse showed significant sexual difficulties in adulthood, including compulsive sexual behaviour, sexual promiscuity, and the use of sex to meet other non-sexual needs (Merrill, Guimond, Thomsen, & Milner, 2003). Dube et al. (2005) suggested that childhood sexual abuse affected victims' neurodevelopment, resulting in subsequent negative behaviours. More recent research with individuals convicted of sexual offences has consistently shown evidence of adverse experiences in the developmental backgrounds of those individuals when compared to the general population (DeLisi & Beauregard, 2017; Levenson, Willis, & Prescott, 2016). This relationship between childhood adversity and subsequent sexual crime or coercion has also been shown in studies that are not limited to incarcerated samples (e.g., Borrowsky, Hogan, & Ireland, 1997; Widom, 1996).

While a large amount of work has focused on male sexual offending (MSO; Langton, Murad, & Humbert, 2015; Levenson, Willis, & Vicencio, 2017; Simons, Wurtele, & Heil, 2002), there has been a limited amount of research that has looked specifically into female sexual offending (FSO) and its possible causes (Cortoni, 2015; Williams & Brierie, 2015). Both females and males convicted of sexual offences have been found to share some characteristics, though there are still noteworthy differences in their offending behaviours (Blanchette & Brown, 2006), emphasising the need for female-centred research to empirically validate female-specific theories of sexual offending. Further information on the demographics and characteristics of females convicted of sexual offences can be found in Cortoni and Gannon's (2016) published overview on Female Sexual Offenders.

Focusing on females, Gannon, Rose, and Ward (2008) examined the backgrounds of 22 females convicted of sexual offences in the United Kingdom. From their findings, they developed the Descriptive Model of Female Sexual Offending (DMFSO). The DMFSO identified three distinct offending styles within the sample, being Explicit-Approach, Directed-Avoidant, and Implicit Disorganised. The findings also highlighted that early family environment and abusive experiences (sexual, physical, or emotional) were prominent in the majority of females interviewed. Gannon et al. (2014) later tested this model with 36 females convicted of sexual offences in the United Kingdom. They found that the DMFSO's offending styles were a reasonable representation of females' offending pathways for sexual offences, further validating Gannon et al.'s (2008) work. While both studies had relatively small samples, similar results were found by Turner, Miller, and Henderson (2008) who utilised a larger sample of 90 females convicted of sexual offending in the United States. Turner et al. (2008) found that over two-thirds of the convicted women had experienced sexual abuse in childhood, with many reporting experiences of other developmental abuse as well.

Drawing on previous research (Cutajar et al., 2012; Turner et al., 2008), Levenson, Willis, and Prescott, (2015) conducted research using the Adverse Childhood Experiences (ACE) scale where they compared the ACE scores of females convicted of sexual offending and females in the general population. They found that the convicted females reported considerably higher scores on the ACE scale, with half the women reporting sexual abuse in childhood, and 80% reporting at least one adverse experience in childhood. In comparison, one-quarter of the non-offending females reported sexual abuse in childhood, and 65% reported at least one adverse experience in childhood. Odds-ratios revealed that females convicted of sexual offending were three times more likely to have been sexually abused in childhood than females in the general population. They also reported higher rates of

childhood sexual abuse than an equivalent sample of convicted males (Levenson et al., 2016; Reavis, Looman, Franco, & Rojas, 2013). In research with non-incarcerated students in Switzerland, Aebi et al. (2015) further found that females who had been sexually abused in childhood were more likely to sexually coerce another person than females who had not been sexually abused in childhood, supporting the sexually abused abuser hypothesis (e.g., Seto et al., 2010).

Though a large amount of previous literature has focused on childhood maltreatment being a risk factor for future sexual offending (Gannon et al., 2008; Langton et al., 2015; Levenson et al., 2015), less research has examined what the psychological consequences of these childhood experiences are, and how these consequences may lead to future sexual offending. Maniglio (2011) proposed that childhood trauma could lead to sexual coping; he argued that for individuals with traumatic early experiences, problematic sexual fantasy could function as a coping mechanism in the absence of more effective strategies. Duncan and Williams (1998) conducted research with adult male victims of childhood sexual abuse and found that these males were more likely to compulsively masturbate during their teens to manage stress, and more likely to later commit sexual offences in adulthood. Smallbone and McCabe (2003) suggested that this could be explained by their finding of childhood sexual abuse leading to early onset masturbation (2.4 years ahead of those not abused), which when combined with deviant sexual fantasies could condition individuals to become more sexually coercive in adulthood.

This reliance on sexual coping has been linked to sexual offending in incarcerated males (Cortoni & Marshall, 2001; Daversa & Knight, 2007; Pagé, Tourigny, & Renaud, 2010). Marshall, Serran, and Cortoni (2000) reported that males convicted of sexual offences were more likely to use sex as a way of coping with stress when compared to other convicted males and non-offending males. This effect was magnified with those convicted of sexual

offences when they had also experienced sexual abuse in childhood, emphasising the link between adverse childhood experiences and sexualised coping strategies. Polaschek, Hudson, Ward, & Siegert (2001) suggested that those convicted of sexual offences used sexual gratification to alleviate negative emotions like depression, guilt, or anxiety. It was also proposed that sexual offending could be utilised as a method of coping for those who struggle with intimate relationships in adulthood (Ward, Keenan, & Hudson, 2000).

Cortoni and Marshall (2001) conducted a series of studies exploring the hypothesis that those convicted of sexual offences used sex as a way of coping with emotional distress, deficits in intimacy, and loneliness. The researchers assessed incarcerated males (divided into rapists, child molesters, and violent non-sexual offenders) and found that the rapists and child molesters used significantly more sexual coping techniques (including masturbation, watching violent or child pornography, fantasising about having sex with a child, and rape) than the violent non-sexual offenders. They speculated that the utilisation of these sexual coping techniques could give the feeling of control in otherwise deficient interpersonal relationships, which could facilitate a reliance on sex as a coping mechanism. Thus far, there has been no literature to show whether this conclusion could reliably be extended to females who sexually offend. This is most likely due to the debate over the actual prevalence of female sexual offenders in the population (Cortoni et al., 2010), with the current numbers showing females representing a very small portion of known sexual offenders (Cortoni, Babchishin, & Rat, 2017).

Current Study

Previous research has evidenced high levels of adverse childhood experiences in the backgrounds of females convicted of sexual offences, compared with females in the general population (Levenson et al., 2015). It has further evidenced a relationship between adverse childhood experiences and sexual coping in males (Daverson & Knight, 2007), and between

sexual coping and sexual offending in males (Cortoni & Marshall, 2001). However, no research has yet established how adverse childhood experiences, sexual coping, and sexual coercion correlate with each other in a female sample. Furthermore, no study has examined whether sexual coping mediates a relationship between adverse childhood experiences and sexually coercive behaviour. In this study we examined the effect of adverse childhood experiences on sexual coping and also sexual coercion by using the ACE scale (Felitti et al., 1998), the Coping Using Sex Inventory (Cortoni & Marshall, 2001), and the Sexual Experiences Survey – Short Form Perpetration (Koss et al., 2006) with a community-based sample of females. The use of a community sample allowed us to establish whether there was preliminary evidence of a relationship between these constructs with greater statistical power than would be afforded by a smaller incarcerated sample.

Hypothesis

We hypothesised that adverse childhood experiences would correlate with coping using sex and sexual coercion. We further hypothesised that coping using sex would also correlate with sexual coercion, and that the relationship between adverse childhood experiences and sexual coercion would be mediated by coping using sex.

Method

Participants and Design

The sample consisted of 275 community-based females, of which 250 completed the survey. Two participants were removed from the sample as their response patterns on the Sexual Experiences Survey were inconsistent with genuine responding¹. The final number of participants included in the study was 248. Participant ages ranged from 18 to 77 years of age ($M=22$, $SD=7$).

¹ Including these individuals does not meaningfully alter the study results.

The sample consisted of both students and non-students. Students were recruited through a university Research Participation Scheme with the incentive of course credits. Non-students were recruited through email and social media snowballing. Recruitment solicitations that asked people to take part in research for a Psychology dissertation were posted on Facebook, Twitter, and LinkedIn, and circulated through university email chains that asked for the survey link to be further disseminated. The majority of the sample (89.5%) were based in the United Kingdom at the time of data collection. The remainder were based in Europe (4.4%), Asia (4.0%), or North America (2.0%). The majority of participants (73%) reported an exclusive sexual interest towards adult males. This survey-based study used a cross-sectional, within-participants design.

Measures

The adverse childhood experiences scale (ACE). The ACE scale (Felitti et al., 1998) consists of ten questions (e.g. Whilst you were growing up, during the first 18 years of life: Did a household member go to prison?). The items are answered as either Yes or No. Scores range from 0-10, the higher the score, the more adverse experiences encountered in childhood. Previous research has found the ACE scale to have a high internal consistency of $\alpha = .88$ (Murphy et al., 2014). The reliability for this scale in the current study was $\alpha = .63$.

The coping using sex inventory (CUSI). The CUSI (Cortoni & Marshall, 2001) is a 16 item inventory that contains statements depicting consenting and non-consenting sexual experiences regarding both adults and children. The inventory describes four forms of sexually related activities: sexual fantasy (e.g. Fantasise about forcing an adult to have sex); masturbation (e.g. Masturbate while fantasising about a child); use of pornography (e.g. Use violent pornography); and actual sexual conduct with another person (e.g. Go out and rape someone). Responses are coded on a 5-point likert scale (from 1 = Not at all, to 5 = Very much) that represents how frequently participants engage in each item when they are faced

with a difficult or stressful situation. The scale has been reported to have a high internal consistency, $\alpha = .88$ (Cortoni & Marshall, 2001). The reliability for this scale in the current study was similarly high, $\alpha = .87$.

The sexual experiences survey – short form perpetration (SES-SFP). The SES-SFP (Koss et al., 2006) includes seven questions regarding coercive sexual activity (e.g. I put *my fingers or objects into a woman's vagina without her consent by: ...*), each with five sub-questions describing the tactics possibly used by the perpetrator (e.g. Showing displeasure, criticising their sexuality or attractiveness, getting angry but not using physical force after *they said they didn't want to*). Participants can select between 0 and 3+ for each tactic on each question to demonstrate how many occasions they have used each tactic for each coercive sexual act. Four of the questions ask how many times the participant has perpetrated a coercive sexual act, and the remaining three ask how many times they have tried to coerce another person into that sexual act, but have not succeeded (e.g. Even though it did not happen, I TRIED to have oral sex with someone or make them have oral sex with me without their consent by: ...).

Some terms in the SES-SFP were slightly adapted to improve participants' understanding of the language (some English US words and phrases were translated to English UK, e.g. *I put my fingers or objects into someone's butt* was translated to *I put my fingers or objects into someone's anus*). The scale was further adapted to remove reference to behaviours that may only be perpetrated by males (e.g. *I put my penis or my fingers or objects into a woman's vagina* became *I put my fingers or objects into a woman's vagina*). Any reference to timeframe was removed from the scale, allowing participants to report whether they had ever experienced the situations outlined in the questions. The original SES-SFP required participants to report their actions from age 14 until 12 months ago, and from 12

months ago until present (Koss et al., 2006), but this clause was removed as it was not central to the hypothesis.

The SES-SFP was selected as a measure of coercion for this study based on its validity (Cecil & Matson, 2006; Koss et al., 2006) and widespread use in forensic psychology research (D'Abreu & Krahé, 2014; Dardis, Murphy, Bill, & Gidycz, 2016; Sigre-Leirós, Carvalho, & Nobre, 2013). Previous research has found the SES-SFP to have acceptable rates of internal consistency (Koss, Figueredo, Bell, Tharan, & Tromp, 1996), with Cronbach's alpha ranging from .74 in females (Pacheco, 2014) to .89 in males (Sorenson, Joshi, & Sivitz, 2014). The reliability for the SES-SFP in the current study was $\alpha = .99$.

Procedure

The study was reviewed and approved by the School of Psychology Research Ethics Committee (REF 20153497). The survey was created using the online survey platform, Qualtrics. After obtaining informed consent, participants completed a series of demographic questions, including gender, age, sexual interests, and what region of the world they were usually based. They then completed the ACE scale (Felitti et al., 1998), followed by the CUSI (Cortoni & Marshall, 2001) and finally, the SES-SFP (Koss et al., 2006).

The survey ended with the single final question "Do you think that you have ever raped someone?" which was answered as either Yes or No.

Analysis

Approximate location of Tables 1 and 2

Means and standard deviations for main variables of interest are reported in Table 1, along with minimum and maximum scores. Following Felitti et al. (1998), the total score from the ACE scale was used as a measure of adverse childhood experiences. The breakdown of prevalence for each of the 10 ACEs is presented in Table 2, and is presented alongside comparable data from a large sample of community females (Centers for Disease Control and

Prevention, 2016). Similarly, the total score from the CUSI (Cortoni & Marshall, 2001) was used as a measure of coping using sex. Based on guidance from Koss et al. (2006), responses to the SES-SFP were ranked to create an ordinal variable of six mutually exclusive categories (increasing in severity) based on participants' most extreme coercive sexual act (see Table 3). Despite non-minimal scoring on the SES-SFP, 100% of the participants answered No to the question Do you think that you have ever raped someone?

Approximate location of Table 3

Data violated various assumptions. Non-parametric correlations with bias corrected and accelerated bootstrap confidence intervals based on 5000 resamples are therefore reported, and mediation analysis included bootstrapped confidence intervals using the percentile method with 5000 resamples.

Results

We examined the correlation (Spearman's rho) between adverse childhood experience, sexual coercion, and coping using sex. Contrary to previous research and to our hypotheses, adverse childhood experiences were not significantly correlated with sexual coercion; $\rho(248) = .06$, $p = .326$, BCa 95% CI [-.07, .19]. However, adverse childhood experiences were positively correlated with coping using sex, $\rho(248) = .197$, $p = .002$, BCa 95% CI [.08, .31]. Sexual coercion was also positively correlated with coping using sex, $\rho(248) = .273$, $p < .001$, BCa 95% CI [.15, .39].

Despite the absence of a relationship between adverse experiences and sexually coercive behaviour, we examined whether there was an indirect effect of adverse experiences on sexually coercive behaviour through coping using sex. Hayes (2013) argued that the absence of a total effect—as found here between adverse experiences and sexual coercion—does not rule out the possible presence of an indirect effect. Results showed a significant indirect effect of adverse childhood experiences on sexual coercion through coping using sex;

$b = 0.023$, percentile 95% CI [0.001, 0.045]. This represents a partially standardised indirect effect of .018, meaning that where two participants differ by one unit on the ACE scale, they differ by about 2% of a standard deviation in severity of self-reported sexual coercion as an apparent effect of adverse childhood experience on coping using sex. In this context, this reflects a small effect.

Discussion

The purpose of the current study was to determine the nature of the relationship between adverse childhood experiences, the use of sexual coping strategies, and sexual coercion in a sample of female participants. We hypothesised that adverse childhood experiences would be a predictor of coping using sex and sexual coercion, and that coping using sex would be a predictor of sexual coercion. We also expected that coping using sex would act as a positive mediator between adverse childhood experiences and sexual coercion.

Contrary to previous research (Gannon et al., 2008; Gannon, Rose, & Ward, 2010; Levenson et al., 2015; Turner et al., 2008) that found consistent relationships between negative experiences in childhood and adult sexual coercion, these constructs did not correlate significantly in our study. However, consistent with previous research (Daversa & Knight, 2007; Marshall & Marshall, 2000; Ward & Beech, 2006), we found a positive but weak correlation between adverse childhood experiences and sexual coping. Similarly, we found a positive moderate correlation between sexual coping and sexual coercion, which mirrored previous research with males (Cortoni & Marshall, 2001; Daversa & Knight, 2007; Pagé et al., 2010). Despite the lack of an apparent relationship between adverse childhood experiences and sexual coercion, the mediation analysis revealed a significant indirect effect of coping using sex on the relationship between adverse childhood experiences and sexual

coercion, albeit with a small effect size². Our results could be seen as tentative evidence that coping using sex is causally located between adverse childhood experiences and sexual coercion. In other words, for some individuals, a tendency towards coping using sex may emerge from negative childhood experiences, and may play a casual role in problematic sexual behaviour. However, our data from a cross-sectional study with a convenience sample of non-incarcerated individuals did not provide enough evidence to show coping using sex as a primary mechanism explaining the links between childhood experiences and offending behaviour in females. We address some of the limitations of our study below.

The non-significant direct relationship between adverse childhood experiences and sexual coercion could be explained by population differences between current and previous research. Gannon et al. (2008) specifically looked at the backgrounds of females incarcerated for sexual offences; the same was true for Turner et al. (2008), Levenson et al. (2015), and the majority of other researchers. The current study was community based. On this basis, it could be that the correlations in previous research were attributable to a confounding variable, like criminality (Maas, Herrenkohl, & Sousa, 2008) or even hypersexuality (Lamy, Delavenne, & Thibaut, 2016), both of which should be explored in future community-based research in this area. Adverse childhood experiences have been correlated with criminality and the perpetration of violent crimes (Widom & Maxfield, 1996), including intimate partner violence (Fagan, 2005; Magdol, Moffitt, Caspi, & Silva, 1998), which has been evidenced as

² Readers who are only familiar with the Baron and Kenny causal steps approach to mediation may be surprised that we tested an indirect effect in the absence of a significant correlation between ACE and sexual coercion. Hayes (2013) offers a clear examination of why a non-significant total effect should not rule out the possible existence of a total effect. A finding that childhood adversity may influence sexual coercion through sexual coping, does not rule out the possibility that for some people, childhood adversity leads to other psychological outcomes that have a negative (protective) relationship with sexual coercion. On a population level, these contrasting indirect pathways could result in an overall weak correlation between ACE and SES-SFP, despite the presence of meaningful causal pathways between the constructs.

a factor in the onset of sexual offending in females (Gannon et al., 2008). The backgrounds of the females in Gannon et al.'s (2008) study showed adverse childhood experiences alongside general criminal activity, deviant peer influences, and intimate partner violence in the unstable lifestyle leading up to the convicting sexual offence. Other researchers have found relationships between criminality and later sexual offending (Lussier, 2005; Seto & Eke, 2005), suggesting that the relationship between adverse childhood experiences and sexual coercion may not be as simple as was previously suggested (Levenson et al., 2015; Turner et al., 2008).

Furthermore, the ACE scale used in this study explored 10 adverse experiences in childhood, but did not include questions about childhood bullying (Hendriks & Bijleveld, 2004), childhood mental health (Marshall & Marshall, 2000; Mathews, Hunter, & Vuz, 1997), or childhood sexual abuse by someone less than five years their senior (Siegel & Williams, 2003; Hagan, Gust-Brey, Cho, & Dow, 2001). These three factors have all been found to affect criminality in later years, and have been recorded as factors in the pathways towards female sexual offending (Gannon et al., 2008; Kubik, Hecker, & Righthand, 2003; Tardif, Auclair, Jacob, & Capentier, 2005). It is possible that these omissions from the measure could have influenced the lack of a significant direct relationship between adverse childhood experiences and sexual coercion. In addition to this, the negativity of the scenarios in the SES-SFP could have led to hypothesis guessing (Shimp, Hyatt, & Snyder, 1991), which may have had a further impact on participants' responses through social desirability bias (Fisher, 1993).

The positive moderate correlation between coping using sex and sexual coercion was expected based on previous research (Cortoni & Marshall, 2001). In Cortoni and Marshall's (2001) research, they stated that using sex as a coping mechanism was characteristic of many males convicted of sexual offences. They reported that both the rapists and child molesters in

their sample resorted to sexual coping when faced with difficult, stressful, or upsetting situations, in contrast to violent non-sexual offenders who typically did not use sex as a method of coping. Their results implied that sexual coping could have played a large part in their motivation for sexual offending. It is therefore possible that in the current study, the perpetration of sexually coercive acts could have been motivated by the presence of difficult, stressful, or upsetting situations, similar to those in Cortoni and Marshall's (2001) study.

Many of the papers used to justify the current study's hypothesis were based on research with male sexual offenders (Daversa & Knight, 2007; Langton et al., 2015; Reavis et al., 2013). Previous research on females has similarly drawn on male-specific theories or empirical findings with males to explain female-perpetrated sexual offending (Cortoni & Gannon, 2011; Gannon et al., 2010; Levenson et al., 2015). Although there has previously been a debate in the literature over the potential differences between males and females in their motivations for sexually offending (Blanchette & Brown, 2006; Cortoni & Gannon, 2011), current research has reinforced the idea that there could be fewer differences than initially perceived (Levenson et al., 2015; Pflugradt, Allen, & Marshall, 2018).

The correlation between ACE and the use of sexual coping strategies has only previously been explored with incarcerated males (Marshall et al., 2000). Evidence of a relationship, albeit a small one, in the current sample of community females is an interesting standalone finding. Caveats of inferring causality from cross-sectional data notwithstanding, this finding provides tentative evidence for an aetiological pathway between childhood adversity and the functions and uses of sex among females. The, similarly-caveated, support for our mediational hypothesis implies that subsets of males and females may use similar sexual strategies to cope with difficult, stressful, or upsetting situations. Future studies should seek to replicate our findings and compare community samples to an equivalent sample of

females convicted of sexual offences to help further understand the relationship between adverse childhood experiences, the use of sexual coping strategies, and sexual coercion.

The SES-SFP scores suggested that approximately 15% of the participants had reported perpetrating behaviours that may be classed as sexual offences, with over 7% reporting behaviours that were classified as rape or attempted rape. Compared to previous research, these statistics show relatively high numbers considering the sample consisted of non-incarcerated females (Cortoni, Hanson, & Coache, 2010). However, recent research across 12 countries found that on average, 2.2% of sexual offences reported to police were committed by females, with victimisation surveys suggesting the true number of sexual offences committed by females could be up to six times higher (Cortoni et al., 2017). Numbers in the current study are therefore not inconsistent with these findings.

Our study briefly touched on rape recognition, asking whether participants believed that they had ever raped someone. In United Kingdom law, a conviction for rape requires penetration with a penis (Sexual Offences Act, 2003), though it has been suggested that many lay people consider sexual assault featuring sexual penetration (by any body part or object) as rape also (Smith, 2004). Despite this, and regardless of the clear indication in both the CUSI and the SES-SFP that some sexual offences had been committed (including those categorised by the SES-SFP as rape), all of the participants reported that they had never raped anyone. It is possible that the sample did not class their physical actions as rape (Frese, Moya, & Megías, 2004), or that they did not believe women could commit rape at all (Clark & Hatfield, 1989).

Limitations

Although anonymity was assured throughout the survey, it is possible that the self-report measures could have been tainted by social desirability bias (Fisher, 1993). This has been a limitation in a number of previous studies that investigated females who committed

sexual offences (Gannon et al., 2008; Levenson et al., 2015; Turner et al., 2008).

Nonetheless, even with possible under-reporting of undesirable behaviours (Foddy, 1994), the current research was still able to identify a small percentage of females who self-reported the commission of sexual offences in the community sample (see Table 3 for breakdown).

Furthermore, as mentioned above, the ACE scale was potentially limited by its omission of a number of childhood factors that have been linked to adult criminality. A more up-to-date and inclusive revision of the ACE scale could increase its reliability (Finkelhor, Shattuck, Turner, & Hamby, 2013). It would also allow for a more in-depth examination of participants' childhoods, and give more variables to examine in the relationship between adverse childhood experiences and adult sexual coercion. Another limitation is that the scale used to measure sexual coercion (the SES-SFP) did not explore all the dimensions of sexual offending in females. This reflects a limitation of the SES-SFP rather than the current research per se, as the combination of the CUSI and the SES-SFP allowed for a more accurate picture of participants' sexual experiences.

None of the scales used in this study were specifically designed for females (Cortoni & Marshall, 2001; Felitti et al., 1998; Koss et al., 2006). Though this would have had little impact on the measurements for adverse childhood experiences, the measures of sexualised coping and sexual coercion could have benefitted from including more female-specific items. The choices of tactics in the SES-SFP were validated using male subjects (Koss et al., 2006), but as females are typically less aggressive than males (Mestre, Samper, Frías, & Tur, 2009), they would not have necessarily used the same tactics to achieve sexual coercion (Freeman & Sandler, 2008). In the future, researchers should consider altering aspects of the SES-SFP to include more female-specific items (for example by including items assessing coerced/forced vaginal penetration with male victims), thus facilitating the development of a more robust model of sexual experiences and behaviours. The same can be said for the CUSI; at the time

of data collection there were no alternative measures of sexual coping despite technological developments impacting on people's sexual lives (e.g., internet, social media, phone apps) since its original development. While the current study worked on the assumption that the CUSI would still measure the underlying construct of sexual coping, it should be recognised that the measure is now somewhat dated. An up-to-date measure of sexual coping that has been specifically designed for and validated with females would be a useful tool in further understanding the sexual behaviours of this population.

Conclusions

The current research has explored a small section of a heavily under-researched area within forensic psychology. This study provides insight into females' potential motivations for sexual offending, which we hope will prompt further research on adverse experiences and their consequences in relation to female-perpetrated sexual offending. While the results of this research support the hypothesis that sexual coping functions as a mediator between adverse childhood experiences and adult sexual coercion, it also presents more questions about the relationship given its small effect size and lack of a significant total effect. As a result, the value of this research lies in its incremental contribution to the research on the aetiology of sexual coercion by females, and in research on the deleterious consequences of adverse childhood experiences.

Based on the findings from this research, strategies aimed at preventing females from committing sexual offences should consider the role that coping using sex plays in the path towards sexual offending. This study has highlighted coping using sex as a potential factor in the onset of female sexual offending. Future research in this area should address possible other mediators between adverse childhood experiences and sexual coercion. It should also consider whether adverse childhood experiences actually do affect a woman's likelihood to sexually offend, and whether specific adverse childhood experiences, like childhood sexual

abuse (Gannon et al., 2008) or domestic violence in the home (Gannon et al., 2010), could be pinpointed as having more or less of an effect on proclivity than other adverse childhood experiences. Understanding this influence could have implications for both prevention strategies and treatment therapies for females who sexually offend.

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Table 1

Descriptive statistics for adverse childhood experiences, coping using sex, and sexual coercion.

	M	SD
Adverse Childhood Experiences	1.85	1.79
Coping Using Sex	24.48	8.43
Sexual Coercion	1.50	1.33

Note: Minimum possible score for Adverse Childhood Experiences = 0, for Coping Using Sex = 16, and for Sexual Coercion = 1.

Table 2

Prevalance of ACEs among study sample, with comparison.

	Frequency	Percent	Percentage in CDC- Kaiser ACE Study (Females only; n=9,367)
Emotional abuse	76	30.6	13.1
Physical abuse	64	25.8	27
Sexual assault	37	14.9	24.7
Emotional neglect	57	23	16.7
Physical neglect	11	4.4	9.2
Parents divorce/separation	91	36.7	24.5
Mother treated violently	13	5.2	13.7
Family drug/alcohol problem	32	12.9	29.5
Family mental illness	66	26.6	23.3
Parent ever go to prison	11	4.4	5.2

Note. Percentage of ACEs among females in a large US sample included for comparison (Centers for Disease Control and Prevention, 2016).

Table 3

Frequency statistics from the sexual experiences survey – short form perpetration, scoring based on mutually exclusive categories.

	Frequency	Percent
1 Non-Perpetrator	209	84.3
2 Sexual Contact	11	4.4
3 Attempted Coercion	2	0.8
4 Coercion	8	3.2
5 Attempted Rape	5	2.0
6 Rape	13	5.2