Outcomes of Sexual Abuse Differentiated by Victim Gender and Perpetrator Gender

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Abstract

Most research regarding sexual abuse has focused on male perpetrators and the impact female-perpetrated sexual abuse has on victims remains comparatively unknown. How female-perpetrated sexual abuse impacts victims is important to understand to assess how it differs from male-perpetrated sexual abuse and how best to support these victims. To address this gap, the current study aimed to measure outcomes experienced by sexual abuse victims, and identify any differences in outcomes by victim gender and/or perpetrator gender(s). 109 female and 100 male adults who self-identified as victims of sexual abuse took part in the current study and completed an anonymous online survey. Participants were recruited from Prolific, New Zealand sexual abuse victim agencies and online discussion forums, and a New Zealand university. Findings suggested that female participants reported significantly higher symptoms relating to dissociation, anxiety, depression, sexual abuse trauma, total symptoms and lower self-esteem, once covariates were controlled for, compared to male participants. Perpetrator gender was only significantly associated with drug and alcohol use, whereby participants abused by males only reported significantly lower use than participants abused by females only and both males and females. No significant interaction effects between victim gender and perpetrator gender(s) were identified. These findings suggest that females may display worse outcomes following sexual abuse in many areas compared to males, but that perpetrator gender does not seem to be associated with negative effects of sexual abuse. Predominantly internalising symptoms, which are elevated for females in general, were measured, however. From these findings, it is concluded that sexual abuse perpetrated by a female is as damaging for victims as male-perpetrated sexual abuse. Findings could help shape professional and laypeople's views which often perceive that sexual abuse perpetrated by a female is not as harmful for victims as male-perpetrated sexual abuse.

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Sexual abuse is a global issue with high rates across many countries. A meta-analysis of sexual abuse rates from 22 countries found that 7.9% of males[1] and 19.7% of females report experiencing sexual abuse before the age of 16 (Pereda et al., 2009). These figures increase to around 35% of females and 12% of males experiencing sexual abuse when it is assessed over the lifetime (Ministry of Justice, 2022). Although these estimates are alarming, they are most likely underestimates due to many sexual abuse cases going unreported or undetected.

The large number of individuals that experience sexual abuse, alongside the debilitating effects it can have on victims (Fergusson et al., 2013), has led to sexual abuse being recognised as a global issue that has warranted much research. Currently this research has largely focused on male perpetrators and female victims, as this is the dynamic that is predominantly reported (Elliot, 1994; Hayes & Baker, 2014). Sexual victimisation perpetrated by females, conversely, remains somewhat ignored and under-researched (Fisher & Pina, 2013). Thus has resulted in limited understanding of how female-perpetrated sexual abuse (FPSA) is experienced by victims and the impact it has on them (Denov, 2004).

There are a number of proposed reasons why FPSA may be under-researched. Perhaps the most straightforward is that there are substantially fewer cases of FPSA compared to male-perpetrated sexual abuse (MPSA) cases. Research predicts the proportion of sexual abuse cases committed by females could range between 1% and 20%, depending on the source of data collection (Peter, 2009). A recent meta-analysis assessing rates of sexual abuse using official data from 12 countries found that of all sexual abuse cases, 0.4%-6.8% were perpetrated by females (Cortoni et al., 2017). The meta-analysis also found, however,

[1] Current discussions around the different terms to denote gender versus sex is acknowledged. The current thesis adopted Stats NZ (2021) data standards for collecting gender, sex, and variations of sex characteristics which uses the terms male and female to denote gender.

that this estimate increased to an average of 12% of all sexual abuse cases being perpetrated by females, if the estimate was based on self-report victimisation surveys. This finding therefore highlights not only the proportion of sexual abuse cases that are committed by females (which is considerably lower than MPSA, no matter how this is measured), but also that FPSA cases may be less likely to be officially reported than MPSA cases (as evidenced through victimisation surveys producing higher rates of FPSA).

An additional proposed reason for FPSA being under-researched is that the notion of female perpetrators contradicts how females are portrayed in society. Society portrays females as being nurturing and protecting in the caregiver role, as well as being placid and non-sexual (Denov, 2004). Therefore, the idea of females sexually abusing causes cognitive dissonance, as it is vastly different to how females are thought of, and expected to behave (Cortoni et al., 2017). There is a lack of ability to comprehend that females can sexually offend and so when this notion is put forth there is no socially acknowledged or accepted place to put this behaviour (Peter, 2006). This contradiction between expected and actual behaviour can lead victims and witnesses to disregard or downplay abusive behaviour perpetrated by females, which may lead to non-reporting.

Additionally, it has been suggested that FPSA may be heavily underreported due to factors that are specific to experiencing sexual abuse perpetrated by a female (Oliver, 2007). These include the belief that FPSA is less harmful than MPSA, the societal view that younger males having sexual contact with older females is glorified and therefore may not be deemed as sexual abuse, as well as sexual abuse by females in the caretaking role being misidentified by the victim because of the caretaker status (Oliver, 2007).

Victim Outcomes of Male-Perpetrated Sexual Abuse

Although FPSA occurs at a lesser rate than MPSA, the rate at which it occurs still warrants in-depth analysis due to the substantial negative impacts experienced by victims of

sexual abuse. Research exploring the effect that sexual abuse has on victims has largely focused on MPSA, establishing that sexual abuse has many negative outcomes for victims.

For example, Chen et al. (2010) conducted a systematic review and meta-analysis of 37 studies assessing the association between experiencing sexual abuse (both in childhood and adulthood) and obtaining a diagnosis of psychiatric illness over the lifetime. The studies that were analysed included a mixture of childhood sexual abuse, adulthood sexual abuse as well as using both male and female victims. Their study found that there was a significant association, whereby those who had experienced sexual abuse were more likely to have a lifetime diagnosis of anxiety, depression, eating disorders, post-traumatic stress disorder, sleep disorders and suicide attempts compared to those with no sexual abuse history. The odds ratios for these significant outcomes ranged between 2.34 – 16.17. The study by Chen et al. (2010) highlights that experiencing sexual abuse is associated with a higher likelihood of receiving a psychiatric diagnosis over the course of an individual's lifetime. Although this study did not account for confounding factors, research has found similar results even when factors such as socioeconomic status, relationship to abuser and number of episodes of abuse have been accounted for (Paolucci et al., 2001).

Alongside psychological problems, research also shows that individuals with a sexual abuse history may have problems in aspects such as physical health, sexual problems and interpersonal problems (Fergusson et al., 2013; Mullen et al., 1994). For example, Fergusson et al. (2013) assessed psychological wellbeing, sexual risk taking, physical health and socioeconomic outcomes in individuals who had experienced sexual abuse prior to age 21. Their study was longitudinal, and outcomes were assessed at ages 21, 25 and 30 years old. Findings indicated that experiencing sexual abuse had a large effect on the likelihood of experiencing any mental health problem ($d = 0.48$) compared to individuals who had not experienced sexual abuse, even when confounding factors had been accounted for. A range of

mental health problems (major depression, anxiety, suicidality, alcohol and drug use) were experienced at a higher rate in those who had experienced sexual abuse compared to those who had not (effect sizes ranged from $d = 0.24$ to $d = 0.53$). As well as mental health problems, other problems including low self-esteem, poor life satisfaction, post-traumatic stress disorder symptoms, earlier sexual activity, more sexual partners, higher frequency of doctor/hospital visits and higher welfare dependence were experienced at a significantly higher rate in those who had experienced sexual abuse compared to those who had not. Interpersonal problems such as feeling disconnected and dissatisfied with partner and sexual problems such as early pregnancy have also been found to be experienced at higher rates for individuals who have a history of sexual abuse compared to those who do not (Mullen et al., 1994).

Other studies have evidenced similar results in that experiencing MPSA leads to many psychological, physical, interpersonal, and sexual problems (Beitchman et al., 1992; Blakemore et al., 2017; Mullen et al., 1994).

It has also been found that as the severity of abuse increases, the rate at which these problems are experienced also increases. For example, it has been found that negative outcomes are experienced at a higher rate when the abuse involved penetration compared to when no penetration was experienced (Beitchman et al., 1992; Fergusson et al., 2013).

Although these studies do not specify the gender of the perpetrator, it is assumed that majority of the victims included were abused by males as this is the dynamic other research has focused on (Denov, 2003).

Current Research on the Impact of Female-Perpetrated Sexual Abuse

It is well-established that experiencing sexual abuse perpetrated by a male can result in many long-term consequences for the victim, however, the degree these problems extend to those who experience sexual abuse perpetrated by a female is relatively less explored.

There is sparse research assessing the impact FPSA has on victims, and the research that does exist suggests that the long-term effects may be similar if not more damaging than experiencing sexual abuse perpetrated by a male (Christensen & Jansen, 2019; Tsopelas et al., 2012). It is important to investigate the impact experiencing FPSA has on victims so that these individuals are provided with adequate support and treatment.

To date, most research that has assessed the impact of FPSA on victims has been qualitative. For example, Denov (2004) interviewed seven male and seven female victims of FPSA and found that only one participant reported no damaging effects from the abuse. Commonly-experienced effects reported by participants in this study included substance abuse, suicidality, depression, fear of abusing children themselves, and identity issues, all of which are also commonly experienced by victims of MPSA. It was also found that all participants in this study experienced rage, distrust in women, and discomfort with sex. While many victims of MPSA also experience discomfort or dissatisfaction with sex (Mullen et al., 1994), both rage and distrust in females may be symptoms exclusively related to FPSA. Additionally, although there are difficulties in directly linking the reported symptoms with experiences of FPSA due to many participants experiencing other forms of abuse (including MPSA), some participants self-identified that the sexual abuse perpetrated by a female was more harmful to them than any other abuse experienced. The finding that participants perceived FPSA to be more harmful than MPSA when both had been experienced has been evidenced in another study by Sgroi and Sargent (1993).

Another qualitative study interviewed nine male and five female victims of FPSA and found similar results (Deering & Mellor, 2011). The participants in this study commonly reported experiencing depression, suicidal ideation, fear and anxiety, trauma, and an inability to express emotions. Their study also found that some participants experienced confusion surrounding the sexual abuse by a female perpetrator, due to feeling loved by the abuser but

also being abused by them, reflecting conflicting feelings. These qualitative studies indicate that the outcomes of FPSA for victims may be similar to (or potentially more severe than) those experienced by victims of MPSA. These studies, however, use small sample sizes making the findings difficult to generalise.

Whilst qualitative studies are useful for exploring phenomena or experiences that have not been highly researched (Denov, 2003), additional research utilising larger sample sizes is needed to quantify the impact experiencing FPSA has on victims in a more generalisable way. One such study quantitatively compared the effects of FPSA with MPSA, focusing specifically on intra-familial abuse experienced by sons (Kelly et al., 2002). Their study assessed 67 male participants who had experienced childhood sexual abuse and were seeking treatment from a mental health clinic. Of the 67 participants, 17 had experienced mother-son incest. It was found that males abused by their mothers experienced sexual problems, dissociation, aggression, interpersonal problems and total symptoms at a significantly higher rate than those who had not experienced sexual abuse perpetrated by their mothers. This study also found that males who had been sexually abused by their mothers had significantly more total symptoms and interpersonal problems than males who had been abused by their fathers, suggesting that experiencing sexual abuse perpetrated by a female may be more damaging than sexual abuse perpetrated by a male. This study provides some insight that FPSA may be more damaging than MPSA, however it is specific to intrafamilial sexual abuse and so is difficult to generalise to other forms of FPSA.

Attitudes Towards Female Perpetrators

Existing research suggests that victims of FPSA experience psychological and interpersonal problems similar to those victims of MPSA experience, however, society and professionals still often perceive that FPSA is less damaging than MPSA. Rogers and Davies (2007), assessed public attitudes towards perpetrators of sexual abuse whereby 337

participants read a sexual abuse scenario where victim age and gender of both the perpetrator and victim were varied across participants. Participants then completed an attribution scale which assessed participants blame towards the victim and perpetrator, the severity of the assault and the credibility of the victim. The results of their study showed that sexual abuse perpetrated by females was deemed as significantly less severe as sexual abuse by a male perpetrator (η_p^2 = 0.03). Their study also found that female perpetrators were seen as significantly less to blame for the abuse than male perpetrators (η_p^2= 0.06), and that victims of FPSA were significantly less credible (i.e. less likely to be believed) than victims who had been sexually abused by a male (η_p^2 = 0.04). Their study highlights that the public often perceive FPSA to be less serious than MPSA, but also that female perpetrators are commonly perceived as less accountable for their actions than male perpetrators are.

This disparity in perceptions of female versus male perpetrators has been found to extend beyond lay members of the general public. Mellor and Deering (2010) assessed how 231 professionals, including psychologists, probationary psychologists, psychiatrists and child protection workers, view male versus female perpetrators of sexual abuse with regard to social service engagement and the perceived impact on victims. Participants were required to read multiple vignettes depicting a child disclosing experiencing sexual abuse where the perpetrator gender, victim gender, age of victim, relationship between victim and perpetrator and manner which abuse was described was manipulated. Participants then responded to the vignettes by answering questions related to the child's credibility, whether they believed social service engagement was necessary, and finally, after reading that the perpetrator confessed to the abuse, the degree to which the child would be negatively impacted by the abuse. This study found that professionals deemed male perpetrators as significantly more deserving of investigation and social service engagement compared to female perpetrators. Regarding the impact on victims, participants in this study perceived that victims of MPSA

would be significantly more negatively affected by the sexual abuse than victims of FPSA. A review of the literature found that the notion that FPSA is less harmful for victims and less deserving of social service or police investigation is evident across other studies (Clements et al., 2014).

Organisational culture and training that professionals receive may aid the belief that FPSA is less damaging and less serious than MPSA. Denov (2001) observed and interviewed 23 police officers and psychiatrists and found that sexual abuse trainings and organisational culture emphasized that perpetrators are male and often neglected to mention female perpetrators or promoted the idea that females are incapable of committing sexual abuse. This was portrayed through reporting where crime analysis reports regarding the perpetrator fail to have options relating to female articles such as skirt or dress. In relation to organisational culture, participants voiced that whenever sex offenders are described or discussed, male pronouns are used for the perpetrator and female pronouns are used to describe the victim. The belief that perpetrators are male, and victims are female led to professionals reframing the sexual abuse, even when the perpetrator was female, so the female abuser was seen as the victim and the male victim was perceived as to blame for the abuse. In line with the findings from Mellor and Deering (2010), Denov (2001) concluded that professionals often perceive FPSA to be less harmful than MPSA. This notion may have implications for victims such as a failure for professional intervention or the belief that intervention is not as serious as intervention for victims of MPSA.

Indeed, other studies have found support for the idea that the minimisation of FPSA by professionals can be harmful to victims. In one study of 14 participants, Denov (2003) found that while positive professional attitudes can result in reassurance and aid the healing process for victims, negative professional attitudes can result in distrust in professionals, anger and questioning, or denying the abuse experienced. Professionals may not provide

adequate support for victims of FPSA due to the preconception that FPSA is not as harmful as MPSA, which may in turn lead to victims being forced to suffer in silence (Denov, 2001). This may also have influence on underreporting, because if victims of FPSA are not believed or not provided with adequate support, they may not disclose the abuse in fear of how professionals will respond (Mellor & Deering, 2010). It is evident that professional attitudes regarding FPSA can often be incongruent with existing evidence which suggests that this form of abuse often results in a range of psychological and interpersonal problems for victims.

Not only does research suggest that society and professionals view female perpetrators as less dangerous and the abuse as less harmful for victims, the criminal justice system parallels these views with how female sexual abuse perpetrators are punished in comparison to their male counterparts. Research has found that female sex offenders are punished more leniently than male sex offenders. For example, Shields and Cochrane (2020) assessed all males and females who were eligible for a prison sentence for committing a sexual offence in the state of Florida between 1995 and 2010 and found that males were significantly more likely to be sentenced to prison than female offenders (58% versus 34% respectively). Their study also found that female sexual abuse perpetrators were most commonly assigned to probation while male sexual abuse perpetrators were most likely sentenced to prison, even when crimes were matched in terms of perpetrator factors (age, ethnicity, prior criminal record) and offence characteristics (severity, type of sexual assault). Research also shows that when female sex offenders are given a prison sentence, it is significantly shorter on average than male sex offenders' average prison sentence (Embry & Lyons, 2012). For example, Shields and Cochrane (2020) found that male sex offender prison sentences were on average 20 months longer than their female counterparts. Together, these findings highlight that female sexual abuse perpetrators are perceived to be less dangerous to

the community, and their abuse potentially less harmful, as evidenced by higher rates of probation and shorter prison sentences than male sexual abuse perpetrators. This, however, contradicts preliminary evidence which suggests that experiencing FPSA could be equally, if not more damaging, than experiencing MPSA.

Victim Gender Differences

While it is important to understand if there are any differences in the impact experiencing sexual abuse has depending on perpetrator gender, it is also important to understand if there are any differences depending on victim gender. That is to say, whether male and female victims experience sexual abuse differently in terms of the impact it has on them. It is important to understand whether male and female victims have different outcomes following sexual abuse as this could influence the type and level of support required (Cashmore & Shackel, 2014). Understanding any differences may also ensure support services are designed appropriately so that they are not only relevant for female victims of sexual abuse, but they also account for the unique experiences male sexual abuse victims may encounter (Banyard et al., 2004).

Currently there are mixed findings as to whether male and female victims experience different outcomes as a result of sexual abuse, regardless of perpetrator gender. For example, Dube et al. (2005) conducted a large-scale study that included 17,337 participants that had and had not experienced any form of childhood sexual abuse. 16% of males and 24.7% of females in this study had experienced any form of sexual abuse. Study participants answered questions relating to childhood sexual abuse, other adverse childhood experiences, and social and behavioural outcomes. Their study found that both female and male victims of sexual abuse experienced social and behavioural outcomes such as drug and alcohol problems, suicide attempts, depression as well as marital and family problems at a similarly higher rate compared to those with no experience of sexual abuse. Their study, however, did not directly

compare differences in male versus female sexual abuse victims' outcomes, so these finding are preliminary. A systematic review and meta-analysis conducted by Chen et al. (2010) found similar findings in that those who had experienced sexual abuse had higher levels of anxiety, depression, eating disorders and suicide attempts compared to those with no sexual abuse history. There was, however, no difference in symptoms between male and female victims.

In contrast, Soylu et al. (2016) assessed a sample of 1,250 sexual abuse victims (aged between 0-18) who had been referred to a psychiatric department and conducted interviews to obtain mental wellbeing, intelligence and abuse characteristics. 1,204 participants completed psychiatric evaluation and it was found that females were significantly more likely than males to experience at least one mental disorder (70.2% vs 55.9%, respectively), and in particular to experience higher rates of major depressive disorder (38.4% of females and 15.5% of males). Their study found that there was no significant difference in rates of post-traumatic stress disorder or conduct disorder between male and female participants. Other research suggests that females are more likely to display internalising behaviours, such as mood disorders, disordered eating and somatic complaints while males are more likely to display externalising behaviours, such as sexual risk taking, delinquent behaviour, substance use and suicide attempts following sexual abuse (Chandy et al., 1996; Darves-Bornoz, 1998; Kucharska, 2017). These findings indicate that while males and females may be impacted to the same extent by sexual abuse, they may express these impacts differently.

It is evident that the degree to which males and females are impacted differently from experiencing sexual abuse remains largely unclear due to mixed findings in the literature. It has also been suggested that a reason for this inconsistency could be due to most research focusing largely on female victims and disproportionately fewer on male victims, and so the impact sexual abuse has on male victims remains less established (Dube et al., 2005).

It is worthy to note that none of the current research has included non-binary victims, and so whether these individuals are impacted differently to males and females also remains unknown. Current research examining the impacts of sexual abuse on male and female victims has also not differentiated these effects by the gender of the perpetrator. It is important to investigate whether there are any differences in outcomes following sexual abuse differentiated by perpetrator gender in order to gain deeper understanding of the complex interactions that may be at play.

Criticisms of Current Literature

Much of the literature regarding sexual abuse, and the impact it may have on victims uses clinical samples, meaning the participants are already receiving or seeking clinical treatment. The use of clinical samples may cause bias in the findings because only the most severely impacted individuals are analysed and less severe cases that are not requiring treatment may not be captured. It is therefore important to examine non-clinical samples to ensure a broader range of individuals are being assessed and not just individuals who may be experiencing the worst outcomes. The current study therefore uses a community sample to ensure findings are generalisable and not biased towards those accessing clinical services or experiencing the most extreme symptoms.

Another criticism of the current literature regarding sexual abuse is that it predominantly focuses on individuals who experienced sexual abuse in childhood. Whilst assessing the impact sexual abuse experienced before the age of 18 is important, it makes it difficult to grasp whether findings would be similar if study samples used individuals who had experienced sexual abuse at any age. The current study includes individuals who experienced abuse at any time in their lives, and therefore it is not limited to childhood sexual abuse.

Current Study

Research regarding sexual abuse predominantly focuses on male perpetrators, as males are responsible for a high proportion of all sexual abuse cases. There is a considerable amount of literature that has assessed the impact MPSA has on victims, with a range of associated psychological and interpersonal problems evident, however, comparatively little research has assessed the impact FPSA has on victims. Research that has assessed FPSA has largely been qualitative and used small sample sizes, making the findings difficult to generalise. However, this limited research has suggested that the impact of experiencing FPSA is similarly damaging, if not more damaging, than experiencing MPSA. The literature also suggests that both the general public and professionals, such as psychiatrists and police officers, often perceive FPSA to be less harmful for victims than MPSA, despite literature suggesting that this is not the case.

Additionally, current research has concluded mixed findings as to whether there is a difference in outcomes of sexual abuse between male and female victims. In particular there is a lack of research regarding whether male and female victims of FPSA differ in the impact the sexual abuse has on them as most current literature does not account for perpetrator gender.

There is therefore a need for further research regarding the impact sexual abuse has on victims, differentiated by both perpetrator and victim gender. The current study aimed to address this gap by identifying whether there are any differences in outcomes of sexual abuse victims by both perpetrator and victim gender, as well as to assess whether any interaction effects were evident. This adds to current literature by robustly exploring any potential differences in the harm caused by FPSA and MPSA. The findings could help shape societal and professional views, since current literature and these views are conflicting.

The current study also contributed to the current literature base by extending the potential generalisability of findings. The impact FPSA has on victims has previously been measured using very small sample sizes, and so the current study aimed to recruit a larger sample from which more robust conclusions could be drawn (and which could contribute to future meta-analyses). The current study also used a community sample as opposed to a clinical sample that much research in this area uses. Use of a clinical sample could introduce bias to research, as clinical samples are drawn from populations who were seeking support for poor mental health. This could therefore artificially increase the rate of poorer outcomes identified for victims of abuse. Thus, the use of the community sample in the current study reduced this potential bias and arguably meant that the sample was more representative of the broader victim population.

The current study aimed to investigate whether any differences in outcomes of sexual abuse were experienced depending on the gender of the victim.

The current study also aimed to investigate whether any differences in outcomes existed between individuals who had been sexually abused by females, compared to those who had been sexually abused by males.

It was hypothesised, based on a lack of robust evidence to suggest otherwise, that male and female victims would not report significantly different outcomes as a result of experiencing sexual abuse.

Based on preliminary research that suggests FPSA is as harmful as MPSA, it was also hypothesised that victims who experienced sexual abuse perpetrated by a female would not report significantly different outcomes than victims who experienced sexual abuse perpetrated by a male.

Method

Participants

In total, 302 participants took part in the current study. Participants were recruited through three different platforms – the process of recruitment for each platform is outlined further below. These were Prolific (*n* = 152), sexual abuse victim agencies and online discussion forums in New Zealand (*n* = 14), and first year psychology students at a New Zealand university (*n* = 136). Multiple recruitment platforms were utilised due to the low reporting of sexual abuse by female perpetrators and complications of recruitment from New Zealand sexual abuse victim agencies due to COVID restrictions at the time of initial recruitment. However, the use of these different platforms also ensured a more diverse community-based sample and allowed an appropriate number of participants to be recruited. Participation was voluntary in all cases. To be eligible to participate, individuals had to be fluent in English and aged 18 years or older. However, there were differences in recruitment approach and incentives for participants across recruitment sources. These differences are detailed below.

Prolific participants were recruited through a two-step process. This was required as Prolific does not allow for screening out of participants within individual surveys. In the first step, a screening survey was made available to Prolific workers who were fluent in English and lived in the USA, UK, New Zealand or Australia. This survey was made available to the first 250 males and 250 females (according to data held by Prolific) who clicked on the available link and self-selected into the study after reading an information sheet. The screening survey asked participants their gender identity, whether they had any unwanted sexual experiences in their lifetime, and if so, the gender of the perpetrator. Participants received £0.20 for their participation in this screening survey, which took approximately one minute to complete.

The responses to the screening survey were then reviewed, and an invitation to the main study was sent to a sub-sample of respondents (*n* = 222) who indicated that a) they had

unwanted sexual experiences and b) that they consented to be contacted about the main study. These participants were recruited through a link to the study displayed on the participants' Prolific dashboards; Prolific IDs were used to limit the visibility of the study to only those eligible participants. The dashboard displayed the title and a brief explanation of the research, and participants could self-select into the study by clicking on the provided link. Participants were reimbursed £1.80 for their participation. Of those invited, n = 152 (68.5%) completed the main survey through Prolific.

New Zealand sexual abuse victim agencies and online sexual abuse discussion forums in New Zealand were approached and supplied with a study advertisement to display to the individuals accessing their service or online forum. The victim support agencies chose how to display the study advertisement if they agreed to do so (i.e. physical copy displayed within service or emailed out to individuals accessing service), and the advertisement was posted on the online forums after the moderator of the forum had accepted it. Participants who were recruited through this platform followed the link or scanned the QR code which were both displayed on the study advertisement and this directed them to the study survey. To ensure only participants who had experienced sexual abuse took part in the study, any participants who did not report any unwanted sexual experiences were exited out of the survey prior to completing the remaining measures. Fourteen individuals recruited via NZ victim agencies and online discussion forums completed the study. Upon completion of the survey these individuals were asked whether they would like to go in the draw to win one of three $50 NZD Amazon vouchers (as advertised on the study poster).

First year psychology students received course credit for their participation. These participants were recruited through a link displayed on their study participant pool dashboard, which had multiple studies to choose from. The dashboard displayed the title and a brief description of the research, and participants could self-select to take part in the research by

clicking the provided link. To ensure confidentiality of information, students completed the full survey even if they did not report any experiences of unwanted sexual contact (as the length of time the students took to complete the survey was visible to the co-ordinators of the student research participant pool). If a student selected that they had not received any unwanted sexual contact they were removed prior to any statistical analyses.

Out of the total 302 participants who completed the study, 93 respondents were excluded prior to analysis. Five participants were removed due to not identifying as male or female. These participants were removed from analysis because one of the main objectives of the study was to assess differences in outcomes of sexual abuse by participant gender, and there were insufficient numbers of participants identifying as other genders to include in analysis. Eight participants were removed from analysis as at the end of the questionnaire they selected that they wanted their data deleted prior to analysis. Thirty-one participants were removed from analysis due to failing attention checks. A participant failed an attention check if they had the same response to every symptom in the Trauma Symptom Checklist-40 (Elliott & Briere, 1992), or if they had a different response to the same symptom (four symptoms were presented twice throughout the survey). Forty-five students were removed due to self-identifying that "*None of these events ever occurred*" when they were asked about any sexual acts they had experienced against their will (but they still received course credit for their participation, as they still completed the full survey). And finally, four participants were removed from analysis because they did not identify as having experienced sexual abuse, despite indicating that they had experienced sexual acts against their will. These participants were removed because this lack of identification as a sexual abuse victim impacted responses to the symptoms they were asked about.

After excluding these participants, 209 participants were included in final analyses, of which 125 were recruited from Prolific, 71 were students and 13 were recruited from NZ

sexual abuse victim agencies or online discussion forums. In this final sample, 109 participants identified as female. The mean age of participants was 28.9 years old (*SD* = 11.4) with participants ranging between 18 and 73 years of age. Majority of participants were European/Caucasian (72.7%), had completed some university (51.7%) and were heterosexual (67.9%). Majority of participants had been sexually abused by males only (63.6%) and equal number of participants had been abused by females only and both males and females (18.2%). Full participant demographics are displayed below in Table 1.

Table 1

Participant Demographics

Demographic	*n*	Frequency (%)
Gender		
Male	100	47.8
Female	109	52.2
Perpetrator Gender		
Males only	133	63.6
Females only	38	18.2
Both males and females	38	18.2
Ethnicity		
European/Caucasian	152	72.7
African American	4	1.9
African	6	2.9
Asian	12	5.7
Middle Eastern/North African	4	1.9
Māori	6	2.9
Pacific Islander	3	1.4
Other	22	10.6
Education		
Some school	5	2.4
Completed school	28	13.4
Some university	108	51.7
Undergraduate qualification	48	23.0
Postgraduate qualification	20	9.5
Sexual Orientation		
Heterosexual/straight	142	68.0
Bisexual	36	17.2
Homosexual	13	6.2
Other	4	1.9
Uncertain	14	6.7

Measures

Sexual Abuse

The Early Sexual Experiences Checklist (ESEC; Miller et al., 1992) was used to assess participants' sexual abuse history. Nine behaviours – such as another person showing their sex organs, another person engaging in sexual intercourse with you and engaging in sexual activity so another person can watch – are displayed, and participants are asked to select any behaviours that occurred to them without their consent. This questionnaire was originally developed to assess childhood sexual abuse, but in the current study it was adapted to ask participants about any sexual abuse history by asking, *"At any point in your life, did any of these incidents ever happen to you when you did not want them to?"* as opposed to asking whether any incidents occurred before the age of 16. There was a final option where participants could indicate that *"None of these events ever occurred."* Any participants who selected this option were exited from the survey (except for the University students, as indicated earlier), to ensure only participants who reported being victims of sexual abuse participated in the full study.

The remaining ESEC questions ask participants about the sexual behaviour that bothered them the most, including the age they were when it happened, how long the behaviour continued for, any coercion used, who the perpetrator was and how much the abuse bothered them at the time and at present. Age abuse occurred at was measured as a continuous variable where participants indicated what age they were when the sexual abuse occurred, and if multiple ages were indicated then the youngest age was used in analyses. Frequency of abuse and time period abuse occurred for was answered on a 4-point Likert scale ranging from *"Just once"* (rated as 1) to *"Five times or more"* (rated as 4) for frequency of abuse, and *"Just once"* (rated as 1) to *"A year or more"* (rated as 4) for time period abuse occurred for. There were a range of responses to select for force/pressure used during abuse, however, these were collated into three categories; no pressure or force (coded as 1), psychological pressure (coded as 2), or physical force (coded as 3). Relationship to

perpetrator was classified as relative, friend/acquaintance or stranger and degree to which participant was bothered by the abuse was responded to on a 7-point Likert scale ranging from *"Not at all"* (rated as 1) to *"Extremely bothered"* (rated as 4). The degree to which the participant was bothered by the abuse at present and one question relating to the age of the perpetrator was removed as it was not relevant to the current study. Two items were added to the ESEC as they were relevant to the current study. The gender of the other person/persons involved was asked by a single question ("*What was the gender of the other person/people who forced you to engage in this/these acts").* Time since last abuse was also measured with a single question (*"How long ago was the last time any of these events occurred")* and responses ranged from *"20+ years ago"* (rated as 1) to "*Less than 5 years ago"* (rated as 4).

The original ESEC shows good reliability (Cohens Kappa = 0.92) and good validity in accurately detecting victims of childhood sexual abuse (Miller & Johnson, 1998).

Trauma-related Symptoms

The Trauma Symptom Checklist-40 (TSC-40; Elliott & Briere, 1992) was designed as a measure of childhood sexual abuse trauma, however in the current study it was used to identify trauma from any sexual abuse (i.e. not specific to childhood sexual abuse). The TSC-40 is a highly reliable, short and easy-to-use questionnaire that assesses trauma as a result of sexual abuse and has been validated in samples of males and females (Neal & Nagle, 2013).

The TSC-40 has seven subscales, each comprising a list of related symptoms. The seven subscales are: dissociation (7 symptoms e.g., "*Feeling that things are unreal*"); anxiety (9 symptoms e.g., "*Feeling tense all the time*"); depression (10 symptoms e.g., *"Sadness"*); interpersonal problems (6 symptoms e.g., *"Trouble getting along with others"*); sexual abuse trauma index (measure of trauma related to sexual abuse; hereafter referred to as 'sexual abuse trauma'; 8 symptoms e.g., *"Flashbacks")*; sex problems (8 symptoms e.g*., "Sexual overactivity*"); and sleep problems (6 symptoms e.g., *"Restless sleep"*).

In the current study, two items ("*Sexual problems" and "Bad thoughts or feelings during sex")* were removed from the sex problems subscale as they were asked in the sexual abuse trauma subscale which was directly prior to the sexual problems subscale. One item was removed from the sexual abuse trauma subscale ("*Memory Problems")* as it was asked in the subscale related to dissociation and not seen as relevant for the sexual abuse trauma subscale also. Two items relating to rage ("*Rage towards men*" and "*Rage towards women*") were added to the interpersonal problems subscale, and a suicidality subscale (3 symptoms e.g., "*Plan to take own life*") was added as an eighth subscale. These were included in the current study as previous research has found both rage and suicidality to be related to experiencing sexual abuse (Denov, 2004; Fergusson et al., 2013).

Participants were asked to rate how often they had experienced each symptom in the past three months on a 4-point Likert scale, ranging from "*Never*" (rated as 1) to "*Very often*" (rated as 4). This response scale was adapted in the current study to ask participants to rate how often they had experienced each symptom "*…as a result of the sexual abuse you experienced*." This was to increase the likelihood that the symptoms reported by participants were perceived to be related to experiences of sexual abuse and not due to other factors.

For analyses, participants' mean score, which could range from 1 to 4, for each subscale of the adapted TSC-40 questionnaire was used. For example, for the dissociation subscale the responses to the seven symptoms were averaged to create a mean dissociation score for each participant. A higher mean score reflected a higher degree of that symptom experienced. A total score of the means (hereafter referred to as 'Total trauma symptoms') was also calculated by summing the mean scores across the eight TSC-40 symptom subscales. Total trauma symptoms mean score could range from 8 to 32, where a higher score reflected higher symptoms across the subscales.

The internal reliability of each of the subscales within the TSC-40 was calculated for the current study, with all subscales demonstrating high reliability. Values ranged between α = 0.83 (suicidality) and α = 0.95 (sleep problems). The reliability of each subscale is displayed below in Table 2. The original TSC-40 total (subscales combined) has been shown to have high reliability (α = 0.90; Elliott & Briere, 1992), and although the original questionnaire was adapted, it also showed high reliability in the current study (α = 0.98).

Table 2

Internal Reliability of the Trauma Symptom Checklist Subscales

Subscale	Cronbach's Alpha (α)
Dissociation	.89
Anxiety	.88
Depression	.92
Suicidality	.83
Interpersonal Problems	.84
Sexual Abuse Trauma	.84
Sex Problems	.89
Sleep Problems	.95

Substance Use

Participants' drug and alcohol use was measured with the Tobacco, Alcohol, Prescription Medication, and Other Substance Use Tool (TAPS-1; Gryczynski et al., 2017). Increased drug and alcohol use has been associated with experiencing sexual abuse (Denov, 2004; Dube et al., 2005; Fergusson et al., 2013). The TAPS-1 asks about use in the last 12 months, with responses provided on a 5-point Likert scale ranging from "*Never*" (rated as 1) to "*Daily/almost daily*" (rated as 5). The TAPS-1 comprises four items, collectively relating to the use of tobacco, alcohol, drugs and prescription medications (e.g., "*In the last 12*

months how often have you used any tobacco product (for example, cigarettes, e-cigarettes, cigars, pipes or smokeless tobacco”)).

A total score for overall drug and alcohol use was used in analyses, which was calculated by summing the score across all four items, with the possibility of scores ranging from 4 to 20, where a higher score indicated higher levels of drug and alcohol use.

Self-esteem

Participants’ self-esteem was assessed with the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965), as self-esteem has also been shown to be impacted after experiencing sexual abuse (Denov, 2004; Fergusson et al., 2013). The RSE assesses global self-esteem by asking participants statements about themselves, such as “*On the whole I am satisfied with myself*,” which are responded to on a 4-point Likert scale ranging from “*Strongly agree*” (rated as 1) to “*Strongly disagree*” (rated as 4). The RSE comprises ten items; five of these items are reverse coded as they are worded negatively, such as “*At times I think I am no good at all.*”

A self-esteem total score was derived for each participant by summing all items (after reverse-coding relevant items) in the scale, with possible scores ranging from ten to forty. A higher total score reflected lower levels of self-esteem. The RSE has been shown to have high reliability (Guttman scale coefficient of reproducibility = 0.92) in previous studies (Rosenberg, 1965). In the current study the RSE also showed high reliability ($\alpha = 0.93$).

Adverse Childhood Experiences

The revised Adverse Childhood Experiences (revised ACE; Finkelhor et al., 2015) was used to assess other adverse childhood experiences individuals may have suffered that could impact wellbeing. The revised ACE asks whether 14 different childhood experiences which were related to physical abuse, neglect, peer victimisation/rejection, isolation, exposure to community violence and low socioeconomic status were experienced prior to age

18, and participants respond with a dichotomous yes/no answer (Finkelhor et al., 2015). Participants received a total score, which could range from zero to fourteen, by summing all items that were answered with '*Yes"*; this total score was used in analyses. Higher scores reflected the presence of more adverse childhood experiences.

Disclosure and Treatment

Participants were asked whether they had disclosed the sexual abuse they had experienced to anyone (Yes/No response). If "*Yes*" was selected, participants were asked to specify who they disclosed the abuse to and what the reaction to disclosure was (both open-text responses).

All participants were also asked whether they had sought any treatment for the sexual abuse they had experienced (Yes/No response). If the participant selected "*Yes*" then they were asked to describe what treatment was sought (open-text response)

Demographics

Basic demographic information was obtained from all participants. This included age, country of residence, ethnicity, gender, sexual orientation and highest education level.

A copy of the full questionnaire is displayed in Appendix A.

Procedure

All participants completed the survey online via Qualtrics, which allowed participants to complete the survey in their own time and at a location of their choosing. A separate survey link was produced for the different recruitment platforms. Before commencing the survey, participants read an information sheet that outlined what participation would involve and the risks associated with participation. The information sheet stated that participation was voluntary and anonymous, and that participants could withdraw from the survey at any point by closing the browser. Withdrawing from the survey prior to completion meant that participants did not receive the incentive (except for student participants). The information

sheet also listed multiple sexual abuse helplines and support websites specific to the sample of participants (i.e., helplines at the University were listed for students; international support websites listed for Prolific participants; NZ sexual abuse support websites listed for NZ victim agency and discussion forum participants). After reading the information sheet, participants provided consent to participating before commencement of the survey.

Participants were first asked whether they had experienced any sexual incidents in their life when they did not want them to happen. As mentioned previously, if a participant selected that "*None of these events ever occurred,"* they were immediately redirected to the end of the survey (excluding student participants) and were not included in the final analyses. Participants then completed the remaining questions about the unwanted sexual experience that bothered them the most, followed by questions about trauma symptoms (TSC-40), substance use (TAPS-1) and self-esteem (RSE). Following this, participants answered questions about other adverse childhood experiences (revised ACE) and provided demographic information. Participants were then asked whether they had disclosed the sexual abuse to anyone and if so, who they disclosed to and what their reaction was. Participants were then asked whether they had ever received treatment for the sexual abuse and if so, what kind of treatment they received.

Finally, participants were thanked for their participation and asked whether they were happy for their data to be used in the final analyses or whether they would like their data to be removed prior to analyses. This final question was asked to ensure that participants did not feel obliged to submit their responses in order to receive the associated incentive, especially if they were not comfortable with their responses. Participants that were recruited through NZ sexual abuse victim agencies and online discussion forums were also asked whether they would like to go in the draw to win one of three $50 NZD Amazon vouchers. If "*Yes"* was selected, they were redirected to another survey to fill out their contact information so that

their identifying information could not be linked to the responses. If they selected that they did not wish to go in the draw then they were directed to the end of the survey.

Planned Data Analysis

Data analyses included 11 key outcomes of interest (i.e. dependent variables). These were the participants' mean score for the eight subscales of the adapted TSC-40 questionnaire, total trauma symptom score, drug and alcohol use total score and total score related to self-esteem. The key independent variables included in the analyses were participants' gender (male or female) and reported perpetrator gender (males only, females only or both males and females). There were a number of covariates that were also included in the analysis for each key outcome variable depending on whether the covariate had a significant relationship with each outcome (see further details below). These covariates included time since last abuse, age abuse occurred at, frequency of abuse, time period abuse occurred over, adverse childhood experiences, force/pressure used during abuse, relationship to perpetrator and degree to which individual felt bothered by abuse when it occurred.

Firstly, descriptive statistics were produced such as the estimated marginal means and standard error for all the key outcome variables, separated by participant gender and perpetrator gender.

A two-way ANOVA was then produced for all they key outcome variables with participant gender and perpetrator gender as the independent variables. This resulted in a total of eleven two-way ANOVAs being produced. These ANOVAs were used to analyse whether a significant relationship existed between the key outcome variable and participant gender and/or perpetrator gender, as well as allowing for any interaction effects to be analysed. Assumption tests including homogeneity of variance (Leven's test) and normality (Shapiro-Wilk) were undertaken for each ANOVA, and if either of these assumptions were violated a non-parametric test (Kruskal-Wallis) was run. If the results of the non-parametric test were

congruent with the original ANOVA, then the results from the ANOVA are reported. If the results of the non-parametric test were incongruent with the original AVOVA, however, the results of the non-parametric test were reported.

To assess whether participant and/or perpetrator gender were related to the key outcome variables whilst accounting for potential covariates, multiple regressions were run. However, first a correlation matrix was produced to analyse which continuous or ordinal covariates, had significant relationships with each key outcome. Two separate ANOVAs were also run to assess whether force/pressure used during the abuse and relationship to perpetrator were significantly related to each key outcome. These variables were analysed using ANOVAs as they were categorical variables. Assumption tests, paralleling the ones assessed in the ANOVAs mentioned above were assessed for these ANOVAs also. Only the variables were significantly related to key outcomes were included in further analyses for that particular key outcome variable. To determine whether a variable had a significant relationship with each key outcome, a cut-off point of $p < .10$ was used. This higher cut-off point allowed for more variables that were shown to be highly associated to the key outcome to be included in further analyses.

A total of 10 multiple regressions were run. The multiple regression for each key outcome included participant and/or perpetrator gender (depending on whether the ANOVA indicated it was significantly related to the key outcome), and any covariates that were significantly related to the key outcome variable, as assessed by the correlation matrix and ANOVAs (for force/pressure and relationship to perpetrator). Seven multiple regressions related to seven subscales of the TSC-40 (dissociation, anxiety, depression, interpersonal problems, sexual abuse trauma, sexual problems, sleep problems), one regression related to total trauma symptom score, one regression related to drug and alcohol use (TAPS-1) and one regression related to self-esteem (RSE). No multiple regression was run for suicidality, as

both participant gender and perpetrator gender were found to have no significant relationship with this variable. A significance level of $p < .05$ was adopted for these analyses.

Assumption tests that were analysed for each multiple regression included autocorrelation (Durbin-Watson test; DW) and collinearity (variance inflation factor; VIF and tolerance). Autocorrelation was not an issue for any analysis as all DW values were greater than 1.90 and lower than 2.10, suggesting no issues with autocorrelation. There were no issues with collinearity across all the key outcome variables, as all VIF values were greater than 5 and all tolerance scores were greater than 0.1.

Disclosure and treatment seeking rates were compared across participant gender and perpetrator gender. First, contingency tables were produced which identified the number and proportion of participants (differentiated by participant and perpetrator gender) who disclosed the sexual abuse and sought treatment following sexual abuse. Chi-square analyses were then conducted to assess whether any differences in disclosure and treatment rates between participant and perpetrator groups were significant.

Results

For the primary analyses, participants were grouped depending on their gender and the gender of the individual/s that perpetrated sexual abuse against them (hereafter referred to as 'perpetrator gender'). A breakdown of participants' gender and perpetrator gender is displayed below in Table 3.

Participants were most commonly sexually abused by males only (63.6%), with around two-thirds of these participants identifying as female (66.9%). Conversely, 18.2% of participants were abused by females only, with majority of these participants identifying as male (86.8%). Lastly, 18.2% of participants reported being sexually abused by both males and females with majority of these participants identifying as male (60.5%).

Table 3

Frequencies of Participant and Perpetrator Gender

	Perpetrator Gender		
Gender	**Males Only**	**Both Males and Females**	**Females Only**
Female	89 (42.6%)	15 (7.2%)	5 (2.4%)
Male	44 (21.0%)	23 (11.0%)	33 (15.8%)

Descriptive statistics were produced for all the key study variables and are displayed below in Table 4 (by participant gender) and Table 5 (by perpetrator gender). The mean scores across subscales ranged from 1.23 (suicidality) to 1.69 (sleep problems), where the possible range was between one and four. Total trauma symptoms score was 12.4 (possible range between 8 and 32). The mean score for drug and alcohol use was 8.6 (possible range between 4 and 20), and the mean self-esteem score was 24.6 (possible range between 10 to 40). This suggests that across the sample, the mean score was comparatively low compared to the maximum score for all symptoms except self-esteem where the mean score was comparatively moderate compared to the maximum score. Due to unbalanced sample sizes across groups, descriptive statistics are reported as estimated marginal means and standard errors, rather than raw means and standard deviations. As can be seen in Table 4, female participants had higher estimated levels across all the key outcome variables, indicating lower levels of wellbeing, except for drug and alcohol use for which male participants exhibited higher use. Interestingly, female participants also had higher standard errors and higher maximum scores, indicating that they may experience more extreme but also more variable symptoms than male participants for all the key outcomes.

Table 4

Estimated Marginal Means and Comparison Outcomes for Participant Gender

Key Outcomes	Estimated Marginal Mean	*SE*	*F*	*p*	*d*	95%CI *d*
Dissociation			10.38	.001	0.66	0.25, 1.06
Males	1.33	0.06				
Females	1.72	0.10				
Anxiety			12.51	<.001	0.72	0.31, 1.13
Males	1.30	0.05				
Females	1.68	0.09				
Depression			13.7	<.001	0.76	0.35, 1.16
Males	1.42	0.07				
Females	1.92	0.11				
Suicidality			0.00	.926	0.01	-0.39, 0.41
Males	1.20	0.05				
Females	1.21	0.09				
Interpersonal Problems			9.84	.002	0.64	0.23, 1.05
Males	1.40	0.06				
Females	1.77	0.10				
Sexual Abuse Trauma			12.08	<.001	0.71	0.30, 1.12
Males	1.38	0.06				
Females	1.79	0.10				
Sex Problems			8.88	.003	0.61	0.20, 1.01
Males	1.49	0.07				
Females	1.89	0.12				
Sleep Problems			4.52	.035	0.43	0.03, .84
Males	1.52	0.09				
Females	1.88	0.15				
Total Trauma Symptoms			10.2	.002	0.65	0.24, 1.06
Males	11.0	0.45				
Females	13.9	0.76				
Drug & Alcohol Use			.57	.453	-0.15	-0.56, 0.25
Males	9.00	0.43				
Females	8.36	0.73				
Self-esteem			4.85	.029	0.45	0.04, 0.85
Males	23.3	0.67				
Females	26.2	1.13				

Table 5 shows the descriptive statistics split by perpetrator gender. These findings showed that participants who were sexually abused by both males and females had the highest mean score for all the key outcome variables. Participants who were abused by females only had higher estimated marginal mean scores for dissociation, sex problems and

drug and alcohol use, but worse outcomes were reported by participants abused by males only for all other key outcomes.

Table 5

Estimated Marginal Means and Comparison Outcomes for Perpetrator Gender

Key Outcomes	Estimated Marginal Mean	*SE*	*F* or $\chi^{2\dagger}$	*p*
Dissociation			1.25	.290
Males Only	1.46	0.05		
Females Only	1.49	0.14		
Both Males and Females	1.64	0.10		
Anxiety			2.79	.064
Males Only	1.46	0.05		
Females Only	1.35	0.13		
Both Males and Females	1.66	0.09		
Depression			5.36†	.069
Males Only	1.60	0.06		
Females Only	1.49	0.16		
Both Males and Females	1.92	0.11		
Suicidality			0.88	.416
Males Only	1.21	0.05		
Females Only	1.11	0.13		
Both Males and Females	1.30	0.09		
Interpersonal Problems			5.15	.007
Males Only	1.48	0.05		
Females Only	1.45	0.14		
Both Males and Females	1.82	0.10		
Sexual Abuse Trauma			5.87†	.053
Males Only	1.54	0.05		
Females Only	1.41	0.14		
Both Males and Females	1.80	0.10		
Sex Problems			2.60	.077
Males Only	1.59	0.06		
Females Only	1.60	0.16		
Both Males and Females	1.88	0.11		
Sleep Problems			4.92†	.085
Males Only	1.62	0.08		
Females Only	1.46	0.20		
Both Males and Females	2.02	0.14		
Total Trauma Symptoms			3.74	.025
Males Only	12.0	0.40		
Females Only	11.4	1.04		
Both Males and Females	14.1	0.72		
Drug & Alcohol Use			3.36	.037
Males Only	7.85	0.38		

Females Only	8.28	1.00		
Both Males and Females	9.90	0.69		
Self-esteem			1.96	.143
Males Only	24.90	0.59		
Females Only	22.80	1.55		
Both Males and Females	26.50	1.07		

†Output from Kruskal-Wallis

Differences in Key Outcomes by Participant and Perpetrator Gender

A series of two-way ANOVAs were conducted to assess whether there were significant differences in key outcomes by participant gender and/or perpetrator gender, as well as to assess whether any interaction effects were present. For ease of comparison with group descriptives, results relating to the main effects from these ANOVAs are presented above in Tables 4 (participant gender) and Table 5 (perpetrator gender). Potential interaction effects between participant and perpetrator gender was also assessed for each key outcome, however no interactions were significant. This suggests that participant gender and perpetrator gender did not interact in a way that impacted the degree of symptoms experienced for any of the key outcome variables.

As can be seen in Table 4, participant gender was significantly associated with nine out of the eleven key outcome variables. The descriptive statistics indicated that female participants, as compared to male participants, had significantly higher levels of dissociation, anxiety, depression, interpersonal problems, sexual abuse trauma, sex problems, sleep problems, total trauma symptoms and self-esteem (indicating lower self-esteem). As shown by the Cohen's *d* values, these differences were moderate to large in size, ranging from $d = 0.43$ (sleep problems) to $d = 0.76$ (depression). There were no significant differences between male and female participants mean scores on suicidality or drug and alcohol use.

Comparatively, perpetrator gender was only significantly associated with a small number of key outcome variables, as can be seen in Table 5. These included interpersonal problems, total trauma symptoms, and drug and alcohol use; the relationship between

perpetrator gender and sexual abuse trauma approached significance. Post-hoc analyses (Tukey) indicated that for interpersonal problems (t = -3.12, p = .006, d = -0.59, 95% CI [-0.97, -0.21]), total trauma symptoms (t = -2.55, p = .031, d = -0.48, 95% CI [-0.86, -0.11]) and drug and alcohol use (t = -2.59, p = .028, d = -0.49, 95% CI [-0.87, -0.11]), participants abused by males only had significantly, moderately lower mean scores compared to those abused by both males and females. The data for sexual abuse trauma followed a similar trend to these results, whereby participants abused by males only approached having significantly lower mean sexual abuse trauma symptoms than participants abused by both males and females (t = -2.33, p = .054). Differences between all other perpetrator groups did not reach significance.

Multivariate Models

Correlational Analyses

While the two-way ANOVAs assessed whether there were significant differences in key outcomes by participant and perpetrator gender, they did not account for other variables that may also be associated with the outcome measures. Therefore, multiple regressions were conducted to assess how participant and/or perpetrator gender was associated with the key outcome variables, whilst controlling for potential covariates.

To identify covariates that were significantly related to each key outcome, a correlation matrix was produced; this is displayed below in Table 6. The variables that were significantly associated with each key outcome were included covariates in further analyses related to that particular key outcome; this was to ensure maximum statistical power was available for each analysis, given the relatively small sample size.

As can be seen in Table 6, time since last abuse (last abuse), the time period abuse occurred over (time period), the degree to which the participant was bothered by the abuse at the time it occurred (bothered at time), and experiencing other adverse childhood experiences

(adverse experiences) were associated with many of the key outcome variables. These variables included dissociation, anxiety, depression, interpersonal problems, sexual abuse trauma, sex problems, total trauma symptoms and self-esteem. The beta values (produced in the multiple regressions) indicated that sexual abuse that was more recent compared to the most recent abuse occurring a longer period of time ago was related with higher levels of the particular symptom. Sexual abuse that occurred over a longer period of time compared to abuse that occurred over a shorter period of time was also associated with a higher level of the particular symptom. The beta values also indicated that if the participant was more bothered by the abuse at the time that they were likely to have worse symptoms experienced, and that experiencing a higher number of adverse childhood experiences was also associated with a higher degree of a particular symptom. However, participants' age at the time of the abuse (age) and frequency of abuse (frequency) were significantly associated with a comparatively small number of the key outcome variables.

Table 6

Correlation Matrix Displaying Associations Between Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Dissociation	—																
2. Anxiety	.85***	—															
3. Depression	.80***	.85***	—														
4. Suicidality	.54***	.54***	.56***	—													
5. Interpersonal	.75***	.78***	.86***	.59***	—												
6. Sexual Abuse Trauma	.83***	.86***	.88***	.50***	.79***	—											
7. Sex Problems	.64***	.66***	.78***	.50***	.75***	.80***	—										
8. Sleep Problems	.75***	.78***	.87***	.54***	.77***	.83***	.74***	—									
9. Total Trauma Symptoms	.88***	.91***	.96***	.62**	.90**	.94***	.84**	.91***	—								
10. Alcohol & Drug Use	.20**	.16**	.14**	.08	.11	.18**	.16**	.18**	.18**	—							
11. Self-esteem	.42***	.44***	.52***	.39***	.50***	.47***	.47***	.50***	.53***	.03	—						
12. Last Abuse	.25***	.26***	.13*	.11*	.13*	.21**	.17**	.09	.19**	.19**	.00	—					
13. Age	.05	.08	.04	.09	.00	.07	.09	.03	.06	.14*	.01	.43***	—				
14. Frequency	.05	.08	.12*	.01	.13	.13*	.15**	.07	.11	.06	.16**	-.18***	-.24***	—			
15. Time Period	.14**	.13*	.21**	.10	.20**	.20**	.23***	.15**	.20**	.04	.15**	-.17**	.24***	.84***	—		
16. Bothered at Time	.21**	.25***	.22**	.01	.20**	.25***	.15**	.22**	.23***	-.11	.12*	-.04	.05	-.03	-.01	—	
17. Adverse Experiences	.41***	.45***	.49***	.23***	.45***	.47***	.48***	.49***	.51***	.09	.41***	.01	-.05	.15**	.16**	.16**	—

A series of bivariate regressions were also conducted to identify whether force used during sexual abuse (force/pressure) or participants' relationship to the perpetrator (relationship) were significantly associated with any of the key outcome variables; bivariate regressions were conducted rather than correlations due to the categorical nature of these potential covariates. The results of the bivariate regressions are displayed below in Table 7.

As shown in Table 7, force or pressure used during sexual abuse was significantly associated with all the key outcome variables except self-esteem. The beta values indicated that compared to no pressure or force used during sexual abuse, the use of physical force was associated with significantly higher levels of dissociation, anxiety, suicidality, sleep problems, and drug and alcohol use. There was no significant difference between no pressure or force and psychological force for these variables. In contrast, for the key outcomes of depression, interpersonal problems, sexual abuse trauma, sex problems and total trauma symptoms, the use of either physical force or psychological pressure resulted in significantly higher levels of the outcome variable compared to when no pressure or force was used.

Table 7

Relationship Between Force Used During Abuse and Relationship to Perpetrator with Key Outcome Variables

Outcome	**Predictors**	***F***	***p***	***β***	**95%*CI β***
Dissociation	Force/pressure[a]	9.50	<.001		
	Psychological Pressure			0.22	-0.12, 0.56
	Physical Force			0.83	0.43, 1.24
	Relationship[b]	1.66	.193		
	Friend/acquaintance			0.15	-0.21, 0.50
	Relative			0.42	-0.04, 0.88
Anxiety	Force/pressure[a]	9.31	<.001		
	Psychological Pressure			0.30	-0.04, 0.64
	Physical Force			0.86	0.45, 1.26
	Relationship[b]	2.22	.111		
	Friend/acquaintance			0.31	-0.04, 0.66
	Relative			0.47	0.01, 0.93

Depression	Force/pressure[a]	9.68	<.001		
	Psychological Pressure			0.38	0.04, 0.72
	Physical Force			0.89	0.49, 1.30
	Relationship[b]	1.62	.200		
	Friend/acquaintance			0.14	-0.21, 0.50
	Relative			0.42	-0.05, 0.88
Suicidality	Force/pressure[a]	2.82	.062		
	Psychological Pressure			0.11	-0.24, 0.46
	Physical Force			0.46	0.04, 0.88
	Relationship[b]	0.92	.399		
	Friend/acquaintance			-0.18	-0.53, 0.18
	Relative			-0.31	-0.78, 0.15
Interpersonal Problems	Force/pressure[a]	4.56	.012		
	Psychological Pressure			0.39	0.04, 0.73
	Physical Force			0.63	0.21, 1.04
	Relationship[b]	0.92	.401		
	Friend/acquaintance			0.02	-0.33, 0.38
	Relative			0.27	-0.19, 0.74
Sexual Abuse Trauma	Force/pressure[a]	11.4	<.001		
	Psychological Pressure			0.39	0.06, 0.73
	Physical Force			0.96	0.56, 1.36
	Relationship[b]	3.25	.041		
	Friend/acquaintance			0.14	-0.22, 0.49
	Relative			0.56	0.10, 1.02
Sex Problems	Force/pressure[a]	7.18	<.001		
	Psychological Pressure			0.44	0.09, 0.78
	Physical Force			0.79	0.38, 1.19
	Relationship[b]	0.47	.623		
	Friend/acquaintance			0.04	-0.32, 0.39
	Relative			0.21	-0.26, 0.68
Sleep Problems	Force/pressure[a]	11.5	<.001		
	Psychological Pressure			0.14	-0.20, 0.48
	Physical Force			0.86	0.45, 1.26
	Relationship[b]	2.37	.096		
	Friend/acquaintance			0.14	-0.22, 0.49
	Relative			0.49	0.03, 0.95
Total Trauma Symptoms	Force/pressure[a]	10.3	<.001		
	Psychological Pressure			0.34	0.00, 0.67
	Physical Force			0.90	0.50, 1.31
	Relationship[b]	1.40	.249		
	Friend/acquaintance			0.11	-0.25, 0.47
	Relative			0.38	-0.08, 0.84
Drug & Alcohol Use	Force/pressure[a]	5.11	.007		
	Psychological Pressure			0.10	-0.25, 0.45
	Physical Force			0.59	0.18, 1.00
	Relationship[b]	0.28	.760		

	Friend/acquaintance			0.12	-0.23, 0.48
	Relative			0.04	-0.43, 0.51
Self-esteem	Force/pressure[a]	2.17	.116		
	Psychological Pressure			0.07	-0.28, 0.42
	Physical Force			0.39	-0.03, 0.81
	Relationship[b]	0.44	.647		
	Friend/acquaintance			0.12	-0.23, 0.48
	Relative			0.22	-0.25, 0.68

[a] Comparison group = no pressure/force; [b] Comparison group = stranger

Table 7 also indicates that relationship to perpetrator was only significantly associated with sexual abuse trauma and sleep problems; relationship to perpetrator was therefore only included in further analyses that looked these two outcome variables. Closer inspection of the beta values indicated that being a relative of the abuser was associated with significantly higher levels of sexual abuse trauma and sleep problems compared to when the abuser was a stranger. There was, however, no significant difference in level of symptoms from when the abuser was a stranger compared to when they were a friend or acquaintance for these variables.

Multiple Regressions

A series of multiple regressions were conducted to assess how participant gender and perpetrator gender were related to each key outcome whilst controlling for the significant covariates presented above. Participant and/or perpetrator gender was only included in multiple regressions where significant main effects were identified in the ANOVAs. For this reason, perpetrator gender was only included in the multiple regressions predicting interpersonal problems, total trauma symptoms, and drug and alcohol use. Participant gender was significantly related to all key outcome measures except drug and alcohol use, and so it was included in all further analyses except that which was related to drug and alcohol use.

Findings from the multiple regressions suggested that participant gender was significantly associated with participants' symptoms relating to dissociation, anxiety,

depression, sexual abuse trauma, total trauma symptoms and self-esteem, even once significant covariates were controlled for. Across these symptoms, the findings suggest that female participants experienced significantly higher levels of these symptoms, indicating worse symptoms than male participants and in relation to self-esteem, a higher score reflects lower self-esteem. The results from the multiple regressions related to participant gender are displayed below in Table 8.

Table 8

Relationship Between Participant Gender and Key Outcome Variables, Controlling for Significant Covariates

Key outcome	***β***	**95%CI *β***	***p***
Dissociation[a]	0.29	0.04, 0.55	.025
Anxiety[a]	0.43	0.18, 0.68	<.001
Depression[b]	0.42	0.17, 0.66	.001
Interpersonal[a]	0.28	-0.01, 0.56	.058
Sexual Abuse Trauma[c]	0.38	0.13, 0.63	.003
Sex Problems[d]	0.11	-0.15, 0.36	.413
Sleep Problems[e]	0.23	-0.02, 0.48	.070
Total Trauma Symptoms[a]	0.32	0.05, 0.59	.019
Self-esteem[f]	0.32	0.05, 0.58	.018

a. Covariates included force/pressure, last abuse, time period, bothered at time, ACE sum
b. Covariates included force/pressure, last abuse, frequency, time period, bothered at time, ACE sum
c. Covariates included force/pressure, relationship to perpetrator, last abuse, frequency, time period, bothered at time, ACE sum
d. Covariates included force/pressure, last abuse, frequency, time period, bothered at time, ACE sum
e. Covariates included force/pressure, relationship to perpetrator, time period, bothered at time, ACE sum
f. Covariates included force/pressure, frequency, time period, bothered at time, ACE sum

Participant gender was no longer significantly related to interpersonal problems, sex problems or sleep problems once significant covariates were controlled for. The covariates that were significantly associated with participants symptoms related to interpersonal problems were time period abuse occurred over ($\beta = 0.16$, $p = .012$), time since last abuse (β

= 0.13, p = .050), and experiencing other adverse childhood experiences (β = 0.35, p < .001). The covariates that were significantly associated with sex problems experienced by participants were the degree of force or pressure used during abuse; specifically the use of physical force compared to no force (β = 0.47, p = .018), time period abuse occurred over (β = 0.30, p = .007), time since last abuse (β = 0.19, p = .003), and experiencing other adverse childhood experiences (β = 0.41, p < .001). Finally, the covariates that were significantly related to the degree of sleep problems experienced by participants were force or pressure used during the abuse; specifically the use of physical force compared to no force or pressure (β = 0.44, p = .024), and experiencing other adverse childhood experiences (β = 0.42, p < .001). The results suggest that the significant main effects of participant gender for interpersonal problems, sex problems and sleep problems may be better explained by other factors related to the sexual abuse.

In relation to perpetrator gender, the results of the multiple regressions indicated that perpetrator gender was no longer significantly associated with interpersonal problems nor total trauma symptoms once potential covariates were controlled for. The covariates significantly associated with total trauma symptoms were force or pressure used during abuse; specifically the use of physical force compared to no force (β = 0.46, p = .016), time period abuse occurred over (β = 0.17, p = .005), time since last abuse (β = 0.17, p = .005), and experiencing other adverse childhood experiences (β = 0.41, p < .001). Perpetrator gender remained significantly associated with drug and alcohol use once other factors related to the abuse were controlled for. More specifically, the results indicated that those abused by males only had significantly lower drug and alcohol use than those abused by both males and females (β = -0.51, 95% CI [-0.86, -0.16], p = .004). Participants abused by females only also had significantly higher drug and alcohol use than those abused by males only (β = 0.38, 95% CI [0.03, 0.74], p = .035). There was no significant difference in drug and alcohol use

between participants abused by females only and those abused by both males and females. The results from all the multiple regressions are displayed in Appendix B.

Disclosure and Treatment Outcomes

Descriptive statistics related to rates of disclosure and treatment-seeking by participant gender and perpetrator gender are displayed below in Table 9. Majority of female participants disclosed sexual abuse (71.6%), whereas majority of male participants did not disclose abuse (63.0%); this difference was statistically significant based on a chi-square test of independence (see also Table 9). Majority of both male (91.0%) and female (69.4%) participants did not seek treatment following experiencing sexual abuse, however, the male rate of treatment-seeking was significantly lower than females.

In relation to perpetrator gender, there was no significant difference in disclosure rates by the gender of the perpetrator, however, there was a significant difference in treatment-seeking rates. Table 9 shows that participants abused by females only had comparatively lower treatment-seeking rates compared to those abused by males only and those abused by both males and females. Due to the low proportion of the sample that was abused by females only and by both males and females compared to the number abused by males only, caution is advised when interpreting these findings.

Table 9

Frequency and Differences in Disclosure and Treatment Rates by Participant and Perpetrator Gender

	Disclosure				**Treatment**			
	Yes ***n*** **(%)**	**No** ***n*** **(%)**	χ^2	***p***	**Yes** ***n*** **(%)**	**No** ***n*** **(%)**	χ^2	***p***
Participant Gender			25.2	< .001			15.0	< .001
Male	37 (37.0%)	63 (63.0%)			9 (9.0%)	91 (91.0%)		
Female	78 (71.6%)	31 (28.4%)			33 (30.6%)	75 (69.4%)		
Perpetrator Gender			3.68	.159			6.43	.040
Males Only	79 (59.4%)	54 (40.6%)			31 (23.5%)	101 (76.5%)		
Females Only	16 (42.1%)	22 (57.9%)			2 (5.3%)	36 (94.7%)		
Both Males and Females	20 (52.6%)	18 (47.4%)			9 (23.7%)	29 (76.3%)		

Discussion

The current study aimed to assess whether there is a difference in outcomes following sexual abuse dependent on both the victim's gender and the perpetrator/s gender. The findings suggested that female participants may experience worse symptoms compared to male participants following sexual abuse, for majority of symptoms. There was however, comparatively few differences in symptom levels between participants dependent on perpetrator gender.

It was hypothesised that there would be no significant differences in outcomes following sexual abuse between male and female participants. This hypothesis was largely not supported, as it was found that there was a significant difference between male and female participant outcomes for most symptoms reported to be as a result of experiencing sexual abuse. There was, however, no significant difference found for some symptoms. Female participants reported significantly higher levels of dissociation, anxiety, depression, sexual abuse trauma, total trauma symptoms, and lower levels of self-esteem, after controlling for covariates. There was no significant difference between male and female participants' reported symptoms of suicidality and drug and alcohol use, and the difference in interpersonal problems, sexual problems and sleep problems were no longer significant after controlling for covariates.

The current study also hypothesised that there would be no significant difference in outcomes following sexual abuse dependent on perpetrator gender. The results of the current study largely supported this hypothesis, as it was found that out of the eleven symptoms assessed, only drug and alcohol use significantly differed between participants depending on perpetrator gender, after controlling for covariates. In relation to drug and alcohol use, those abused by males only had significantly lower use than those abused by females only and those abused by both males and females.

There has been no prior research to date comparing the impact of sexual abuse by perpetrator gender that has included both males and females as well as males only and females only as perpetrator groups. Therefore, no hypothesis was made regarding the impact those abused by both sexes would experience.

These findings will be discussed in the context of theory and previous research in the sections below.

Participant Gender

Although it was hypothesised that there would be no significant differences in symptoms experienced as a result of sexual abuse between male and female participants, it is not surprising that female participants experienced some symptoms at a higher rate than male participants. Previous research has produced mixed findings in relation to differences between participant gender. For example, Soylu et al. (2016) found that female sexual abuse victims were more likely to experience any mental disorder, and in particular higher rates of major depressive disorder. On the contrary, Chen et al. (2010) found no difference in symptoms relating to anxiety, depression and suicide attempts between male and female sexual abuse victims. There is, however, limited research that directly compares outcomes following sexual abuse for male victims compared to female victims, as most research compares symptoms between victims and non-victims for the sexes separately. For example, Chen et al. (2010) conducted a systematic review where outcomes differentiated by participant gender were not directly compared, but only analysed as a subgroup interaction. Soylu et al. (2016), on the other hand, directly compared symptoms experienced by male and female victims, similarly to the current study. Research may therefore need to directly compare the impact sexual abuse has on male versus females victims to detect any differences that may exist.

Previous research has often found that females report experiencing more distress in life as compared to males. For example, Mirowsky and Ross (1995) concluded that females experience distress 30% more often than males, even after they had accounted for the notion that males may keep emotions to self and females may more freely express their emotions. Mirowsky and Ross (1995) suggest there are multiple theories that attempt to explain this finding, and these are explored below in relation to the findings of the current study. The structured strain theory, which suggests that females experience more stressful life events than males, may not be relevant to the current study's findings. This is because all participants had experienced sexual abuse and symptoms were focused around this specific stressor by asking participants to rate how often they experienced each symptom *"...as a result of the sexual abuse you experienced."* Another reason the structured strain theory may not be applicable to the current study is because male and female participants experienced a similar number of stressful life events in childhood as measured by the Adverse Childhood Experiences survey (male average = 4.05, female average = 4.63). Other adverse experiences beyond childhood were not measured in the current study, and so it is unknown whether these may have impacted the results in some way. Mirowsky and Ross (1995) also refuted the structured strain view as they found in their study that males and females experienced a similar number of stressful life events.

The gendered response theory, which suggests that females have more emotional responses to stressful life events and males have more externalizing responses to stress, could to some extent, help explain the findings of the current study. This is because it was found that females experienced significantly higher levels of anxiety and depression, which may be viewed as emotional or internalising responses. The notion that females exhibit higher internalising behaviours and males exhibit higher externalising behaviours after experiencing sexual abuse has also been evidenced in other research. For example, Chandy et al. (1996)

and Darves-Bornoz et al. (1998) assessed outcomes experienced by female and male sexual abuse victims. They found that males engaged in behaviours such as delinquent activities, sexual risk taking, violence and substance use, whilst females were more likely to engage in behaviours such as disordered eating and have a higher likelihood of developing mood disorders. Similarly, Kucharska (2017) adopted a university sample and asked about a various number of traumatic events, not specific to sexual abuse. Findings from their study indicated that females experienced higher psychological distress, whilst males had higher impulsivity, conduct disorder and antisocial behaviour. Gendered response theory may partly explain the current study's findings, however, interpersonal problems are often viewed as a 'male oriented response' as they represent an externalising behaviour, but in the current study females had higher levels of interpersonal problems than male participants. It is important to note that in the current study, most of the symptoms participants were asked about could be seen as internalising behaviours. The possibility that males exhibit more externalising behaviours was therefore not able to be fully explored. Future research should assess a range of both internalising and externalising behaviours experienced by sexual abuse victims to determine whether males and females experience different symptoms following sexual abuse.

The response bias view suggests that females express emotions more freely and that males tend to suppress their emotions. Although difficult to measure, this notion was partially validated by Mirowsky and Ross (1995) and has been supported by other research also. For example, Deng et al. (2016) assessed emotional experience and emotional expressivity in response to watching a variety of films, and concluded that males had higher or similar emotional experiences (measured by heart rate) compared to females, but that females displayed higher emotional expressiveness. This finding was strongest for negative emotions such as horror, disgust, sadness and anger. Other research, specific to experiencing stressful life events, has found that females experience higher distress in relation to these events than

males, although emotional experience versus emotional expression was not analysed specifically (Armstrong et al. 2018; Nurullah, 2010). The response bias view may be relevant to the findings of the current study as females may have been more open and expressive of their symptoms, resulting in higher symptoms, compared to males. These findings however, could also reflect that females actually experienced worse symptoms than males.

Perpetrator Gender

Majority of the analyses in the current study did not find a significant difference in participant's symptoms dependent on perpetrator gender. This is in line with previous research that has suggested that the impact of experiencing sexual abuse perpetrated by a female is as damaging in terms of the long-term impact is has compared to experiencing sexual abuse perpetrated by a male (Deering & Mellor, 2011; Denov, 2004). These findings suggest that contrary to common myths, experiencing female-perpetrated sexual abuse is likely to be as harmful to victims as male-perpetrated abuse. Interaction effects were also assessed, however, none of these were significant suggesting that the impact of perpetrator gender does not depend on the gender of the participant. This indicates that sexual abuse perpetrated by a female impacts male and female victims similarly and sexual abuse perpetrated by a male also impacts male and female participants similarly.

That said, there were a small number of significant findings. Participants abused by males only had significantly lower symptoms relating to interpersonal problems, total trauma symptoms and drug and alcohol use than participants abused by both males and females, or by females only; only the difference in drug and alcohol use remained significant after controlling for covariates, however.

It is difficult to determine why this difference remained significant due to the limited research that has assessed how perpetrator gender may impact victim outcomes following sexual abuse. One theory that could help explain this finding related to drug and alcohol use

could be related to female sexual abuse perpetrators offending pattern and victim characteristics being different from male sexual abuse perpetrators. For example, McLeod (2015) found that sexual abuse offenders were three times more likely to be female than male if the victim was experiencing drug-related problems. Therefore, the finding that participants abused by males only had lower drug and alcohol use compared to those abused by both males and females and females only may be due to female perpetrators having a higher likelihood of perpetrating sexual abuse against individuals who were experiencing drug or alcohol related problems. Victim characteristics were not assessed in the current study however, so it is difficult to determine whether victims of female-perpetrated sexual abuse had higher drug and alcohol use prior to experiencing abuse than victims of male perpetrators.

Implications for Disclosure

The results from the current study suggest that the impact of experiencing sexual abuse has similar outcomes for victims regardless of perpetrator gender, which is in line with what other research has suggested (Christensen & Jansen, 2019; Deering & Mellor, 2011; Denov, 2004). However, this notion contradicts other research which has found that laypeople as well as professionals, such as psychologists, child protection workers and police officers, believe that sexual abuse perpetrated by a female is not as harmful for victims compared to sexual abuse perpetrated by a male (Mellor & Deering, 2010; Rogers & Davies, 2007).

A systematic review conducted by Lemaigre et al. (2017) found that multiple studies concluded that a perceived lack of understanding or social support from family or professionals reduced the likelihood of an individual disclosing the sexual abuse due to fear that the disclosure would be met by negative reactions. Negative reactions to disclosure can include being blamed for the abuse and not being believed (Ullman, 2002). The perceived

notion that sexual abuse perpetrated by a female is not as damaging or serious as sexual abuse perpetrated by a male may exacerbate the likelihood of an individual not disclosing the abuse due to a fear that the disclosure will be met by a negative reaction. The current study found that individuals sexually abused by females only may have had lower disclosure rates than those abused by males only and both males and females, however this difference was not significant. Issues with sample size; specifically a low number of participants abused by females only and both males and females compared to number abused by males only, may have limited the likelihood of detecting a significant difference in disclosure rates dependent on perpetrator gender. Further research, with equal participant numbers across groups is needed to assess whether individuals sexually abused by females only have lower disclosure rates than individuals abused by males only, and both males and females. Research analysing reasons for non-disclosure is also needed as this was not assessed in the current study.

Not disclosing sexual abuse may be more damaging for an individual, as it has been found that social support acts as a protective factor in healing after experiencing sexual abuse (Domhardt et al., 2015). A systematic review of the literature which included 37 studies found consistently across studies that positive social support from both family and community was associated with higher resilience following childhood sexual abuse (Domhardt et al., 2015). Previous research suggests that while having strong social support from both family and community is a protective factor against the negative effects of experiencing sexual abuse, fear of negative response to disclosure reduces the likelihood of disclosing abuse which therefore minimises the opportunity to receive social support. The initial notion that sexual abuse perpetrated by a female is not as harmful as sexual abuse perpetrated by a male therefore needs addressing so that this carry-on effect does not occur. It is important that research such as the current study is undertaken so that there is more awareness and knowledge regarding the impact sexual abuse perpetrated by a female has on

victims. It is also important that this research shapes professional and societal views so that they are more in line with actual findings which indicate that female-perpetrated sexual abuse is as harmful and severe as male-perpetrated sexual abuse due to the similar outcomes it can have for victims.

While it has been established that receiving social support from friends, family and community is a protective factor against the negative outcomes of sexual abuse (Domhardt et al., 2015), it is also important that individuals who seek treatment are provided with appropriate treatment from professionals. The current incongruence between actual outcomes and perceived outcomes of female-perpetrated sexual abuse held by professionals is alarming because professional attitudes can greatly shape the level and adequacy of support given to victims. This has been demonstrated in a study conducted by Denov (2003), where it was found that negative professional attitudes towards victims resulted in a distrust in professionals and the victim denying the abuse which could ultimately could lead to the victim suffering in silence. Negative professional attitudes in their study included perceived minimalisation of sexual abuse, disbelief in victims claims and professionals being uncomfortable when the victim was disclosing the abuse. Since professionals may hold a preconception that sexual abuse perpetrated by a female is not as harmful as sexual abuse perpetrated by a male, this could impact how they respond and support victims disclosing sexual abuse perpetrated by a female.

The current study found a significant difference in rates of treatment-seeking. Participants sexually abused by females only had the lowest treatment-seeking rates compared to participants sexually abused by males only and both males and females. This finding may reflect that participants sexually abused by females did not seek treatment due to fear of receiving a negative reaction from professionals, not being believed, or that the impact the abuse had was not severe enough to warrant treatment. However, findings also showed

that female participants were significantly more likely to seek treatment than male participants. A high proportion of participants abused by females only were male, and so the finding that participants abused by females only were less likely to seek treatment than other participant groups may reflect that males are less likely to seek treatment in general as compared to females. Future research is needed to assess reasons for treatment-seeking as well as responses to treatment differentiated by perpetrator gender. This will aid in understanding why treatment is sought and whether differences in treatment outcomes are evident depending on both participant and perpetrator gender.

The results of the current study suggest that the impact of experiencing sexual abuse perpetrated by a female has similar outcomes for victims as compared to experiencing sexual abuse perpetrated by a male which is contradictory to what society including laypersons and professionals perceive. The current societal belief that female-perpetrated sexual abuse is not as severe or harmful for victims than male-perpetrated sexual abuse is concerning because it means that victims may not receive appropriate social support or professional treatment, which both act as protective factors against negative consequences following sexual abuse. Further research is needed to establish the impact sexual abuse by a female has on victims compared with sexual abuse perpetrated by a male to increase the knowledge in this area. This may in turn contest current preconceptions that society holds regarding female-perpetrated sexual abuse and the impact it has on victims.

Limitations

The current study has a number of key limitations that should be considered when interpreting the findings. Firstly, this study included an online questionnaire and participants self-identified themselves as being a victim of sexual abuse. All participants were required to be a victim of sexual abuse and although steps were taken to mitigate the likelihood of individuals who had not experienced sexual abuse taking part in the study, there was still a

chance some participants may not have experienced sexual abuse but were included in the study sample. The term “sexual abuse” can be perceived differently by different people. Therefore, depending on an individual’s perception of what this term means, they may self-identify as being a victim of sexual abuse when they are not, or they may not identify as having experienced sexual abuse when they have. The current study adopted a behavioural sexual abuse measure that explicitly asked participants whether 11 sexual behaviours had occurred to them against their will including one item that indicated none had occurred. Using a behavioural measure with a range of sexual acts aims to capture all the possible acts which could be deemed as sexual abuse, however, there is still the chance some individuals may have not responded truthfully to this question and selected that an act occurred when it had not. If a participant selected that no sexual acts had occurred to them against their will they were exited from the survey (or their data was removed prior to analysis for student participants).

Secondly, participants were given some form of incentive (monetary, course credit or opportunity to win gift card) for completing the online questionnaire. Therefore, participants may have completed the questionnaire to receive the incentive without answering truthfully or accurately. There were some precautions taken to minimise the opportunity for this to happen, such as the use of manipulation checks. The manipulation checks used in the current study were repeated questions (i.e. a specific symptom was used more than once in the questionnaire). Participants who responded with differing severity of the same symptom were removed from analysis, as this may reflect random answering as opposed to reading the question and answering truthfully. Instead of a repetitive question manipulation, it could have been more beneficial to use an instructional manipulation check where some questions asked participants to select a specific response on the Likert scale and the required response for

different checks being manipulated (Oppenheimer et al., 2009). This form of manipulation check ensures that participants read the question and respond accordingly.

Due to the study being in the form of an online questionnaire, it also meant that self-report was used to measure the levels of symptoms experienced. As such, there is the possibility that participants responded in a way they thought was socially desirable instead of responding truthfully. Socially-desirable responding is where an individual may either consciously or subconsciously underreport perceived socially undesirable behaviours and overreport behaviours that the individual perceives are desirable (Latkin et al., 2017). Socially-desirable responding is more common when it is related to a sensitive topic, when there is a reward or gain involved and when the individual can be identified (Tracey, 2016). Latkin et al. (2017) found that participants who gave more socially desirable responses were also more likely to downplay depressive symptoms they were experiencing. This reflects that mental health symptoms may be downplayed in order to be perceived in a more socially desirable light. In order to mitigate the likelihood of participants in the current study responding in a socially desirable way, the study was anonymous; however, there was still the possibility that participants may have engaged in socially desirable responding and downplayed the symptoms they experienced.

Another limitation to the current study was the inability to conclude that the symptoms reported by participants were directly associated with the sexual abuse they experienced. The symptoms participants reported could be a result of many different things, such as life stressors (work, family life, finances), traumatic life events (car crash, loss of a family member), adverse childhood experiences, mental illness or genetic susceptibility. It therefore cannot be concluded that the symptoms experienced by participants were directly related to the sexual abuse experienced and not any of these other factors. The current study did adopt some strategies to increase the likelihood of the symptoms being related to the

sexual abuse. This included accounting for other adverse childhood experiences and directly asking participants how often they had experienced each symptom "*as a result of the sexual abuse experienced*." Asking participants to respond to each symptom with how they perceive it is related to the sexual abuse does not provide conclusive evidence that it is related, however, it does incorporate the participants' perspective on this.

A final limitation of the current study was that a large proportion of participants had been sexually abused by males only (63.6%) compared to the number of participants who had been sexually abused by females only (18.2%) or by both males and females (18.2%). Although this is congruent with trends seen in official crime data, it does mean that the power to detect significant findings may have been reduced. Whilst there were some significant findings, predominantly around differences between female and male victims' level of symptoms experienced, the majority of the findings related to perpetrator gender did not reach statistical significance. These null findings may reflect that there truly is no difference observed between outcomes by perpetrator gender, however, due to the unbalanced data if a significant difference did exist it may not have been detected due to reduced power. It is therefore advised that the findings of the current study are interpreted with caution.

Future Directions

This study is the first to quantitatively compare the impact experiencing sexual abuse perpetrated by a female has compared to sexual abuse perpetrated by a male that utilizes a sample from the general population. This study did however have some methodological issues which make the findings preliminary. More research is needed which addresses these issues to ensure findings are accurate. Firstly, future research should aim to recruit equal participants numbers across the six groups of participants. The current study had a disproportionately low number of participants who had been abused by both males and females and by females only, as compared with males only, which therefore made it difficult

to detect any differences that may have existed between perpetrator groups. Participants who were abused by both males and females had higher levels of symptoms across all the symptoms assessed, although few of these differences reached significance. Further research directly comparing outcomes for those abused by both males and females compared to those abused by males only or females only is needed to determine whether experiencing sexual abuse by both genders is more harmful than experiencing sexual abuse by a single gender.

The findings from the current study, as well as the other limited research in this area, suggests that sexual abuse perpetrated by a female is as harmful for victims, as experiencing sexual abuse perpetrated by a male. However, laypeople, and some professionals, perceive that female-perpetrated sexual abuse is not as harmful for victims as male-perpetrated sexual abuse. Future research is needed to assess whether the potential inaccurate perception held by laypeople and professionals impacts the support provided to individuals who have experienced female-perpetrated sexual abuse. This is important to assess because it has been shown that social support and professional treatment acts as a protective factor against the negative outcomes experienced by sexual abuse victims.

Conclusion

The aim of the current research was to assess the outcomes experienced by sexual abuse victims differentiated by both victim and perpetrator gender. The findings indicated that there may be some differences in symptomology following sexual abuse between male and female victims. Females reported experiencing higher levels of dissociation, anxiety, depression, sexual abuse trauma, total trauma symptoms, and lower self-esteem than males, once covariates were accounted for. Whether females actually experienced worse symptoms, or whether females were more open and expressive of their symptoms is difficult to determine, however. It was also found that there was little difference in symptoms between participants depending on perpetrator gender. Together these results suggest that female

victims of sexual abuse may experience worse symptoms than male victims and that female-perpetrated sexual abuse is as harmful for victims as being abused by a male perpetrator. Limitations that need to be considered when interpreting the results include the over representation of participants abused by males only (thereby reducing the statistical power to detect significant effects), and the difficulty in determining that the symptoms reported were as a result of the sexual abuse. Further research, that aims to recruit equal participant numbers across groups is needed to assess whether there are consistent differences in symptoms depending on both victim gender and perpetrator gender. Finding from the current study may help shape societal and professional views regarding female-perpetrated sexual abuse so it is no longer seen as less harmful and severe than sexual abuse perpetrated by a male.

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Appendix A

Questionnaire

Start of Block: Screener

At any point in your life, did any of these incidents ever happen to you *when you did not want them to?* (Select all that apply)

- ☐ Another person showed his or her sex organs to you
- ☐ You showed your sex organs to another person at his or her request
- ☐ Someone touched or fondled your sex organs
- ☐ You touched or fondled another person's sex organs at his or her request
- ☐ Another person had sexual intercourse with you
- ☐ Another person performed oral sex on you
- ☐ You performed oral sex on another person
- ☐ Someone told you to engage in sexual activity so that he or she could watch
- ☐ You engaged in anal sex with another person
- ☐ Other (please specify) _____
- ☐ ⊗ None of these events ever occurred

Skip To: End of Survey If At any point in your life, did any of these incidents ever happen to you when you did not want th... = None of these events ever occurred

Page Break

What was the gender of the person/people who forced you to engage in this/these acts?

- ○ Males only
- ○ Females only
- ○ Both males and females
- ○ Unknown
- ○ Other (please specify) _____

How long ago was the last time any of these events occurred?

- ○ Less than 5 years ago
- ○ 5-10 years ago
- ○ 10-15 years ago
- ○ 20+ years ago

End of Block: Screener

Start of Block: Early Sexual Experiences Survey

If more than one of these incidents ever happened to you, please answer the following questions by *thinking about the one behaviour that bothered you the most.*

Please indicate below which incident bothered you the most.

- ○ Another person showed you his or her sex organs
- ○ You showed your sex organs to another person at his or her request
- ○ Someone touched or fondled your sex organs
- ○ You touched or fondled another persons sex organs at his or her request
- ○ Another person had sexual intercourse with you
- ○ Another person performed oral sex on you
- ○ You performed oral sex on another person
- ○ Someone told you to engage in sexual activity so that he or she could watch
- ○ You engaged in anal sex with another person
- ○ Other _____

How old were you when it happened?

_____

What was the gender of the other person/persons involved?

- ○ Male only
- ○ Female only
- ○ Both males and females
- ○ Unknown
- ○ Other (please specify) _____

Who was the other person involved?

- [ ] Relative (please specify the relation. e.g., cousin, father, sister, etc)

_____

- [ ] Friend or acquaintance
- [ ] Stranger

How many times did this behaviour occur?

- ○ Just once
- ○ Twice
- ○ 3 or 4 times
- ○ 5 times or more

Over how long a period did this behaviour occur?

- ○ Just once
- ○ A month or less
- ○ Several months
- ○ A year or more

How much did this experience bother you *at the time*?

- ○ 1- not at all
- ○ 2
- ○ 3
- ○ 4- moderately
- ○ 5
- ○ 6
- ○ 7- extremely

How much does this experience bother you *now*?

- ○ 1- not at all
- ○ 2
- ○ 3
- ○ 4- moderately
- ○ 5
- ○ 6
- ○ 7- extremely

What kind of psychological pressure or physical force did the person use, if any? (select all that apply)

- ☐ They tried to talk you into it
- ☐ They scared you because they were bigger or stronger
- ☐ They said they would hurt you
- ☐ They bribed you
- ☐ They pushed, hit, or physically restrained you
- ☐ You were afraid they wouldn't like or love you
- ☐ They physically harmed or injured you
- ☐ They threatened you with a weapon
- ☐ They drugged you or got you drunk
- ☐ Other (please specify) _____
- ☐ None of these occured

End of Block: Early Sexual Experiences Survey

Start of Block: Trauma symptom checklist -40

For the following, please indicate how often in the past 3 months you have experienced each symptom **as a result of the sexual abuse you experienced**

	Never	Occasionally	Fairly often	Very often
Flashbacks	○	○	○	○
Spacing out	○	○	○	○
Dizziness	○	○	○	○
Memory problems	○	○	○	○
Feelings that things are unreal	○	○	○	○
Feeling that you are not always in your body	○	○	○	○
Passing out	○	○	○	○

For the following, please indicate how often in the past 3 months you have experienced each symptom **as a result of the sexual abuse you experienced**

	Never	Occasionally	Fairly often	Very often
Headaches	○	○	○	○
Stomach problems	○	○	○	○
Anxiety attacks	○	○	○	○
Dizziness	○	○	○	○
Feeling tense all the time	○	○	○	○
Having trouble breathing	○	○	○	○
Unnecessary or over frequent washing	○	○	○	○
Fear of men	○	○	○	○
Fear of women	○	○	○	○

For the following, please indicate how often in the past 3 months you have experienced each symptom **as a result of the sexual abuse you experienced**

	Never	Occasionally	Fairly often	Very often
Insomnia	○	○	○	○
Weight loss (without dieting)	○	○	○	○
Sadness	○	○	○	○
Waking up early in the morning	○	○	○	○
Uncontrollable crying	○	○	○	○
Desire to physically hurt yourself	○	○	○	○
Feelings of inferiority	○	○	○	○
Feelings of guilt	○	○	○	○
Trouble controlling your temper	○	○	○	○
Low sex drive	○	○	○	○

For the following, please indicate how often in the past 3 months you have experienced each symptom **as a result of the sexual abuse you experienced**

	Never	Occasionally	Fairly often	Very often
Thought about taking own life	○	○	○	○
Made a plan to take own life	○	○	○	○
Attempted to take own life	○	○	○	○

For the following, please indicate how often in the past 3 months you have experienced each symptom **as a result of the sexual abuse you experienced**

	Never	Occasionally	Fairly often	Very often
Feeling isolated from others	○	○	○	○
Loneliness	○	○	○	○
Trouble getting along with others	○	○	○	○
Desire to physically hurt others	○	○	○	○
Rage towards men	○	○	○	○
Rage towards women	○	○	○	○

For the following, please indicate how often in the past 3 months you have experienced each symptom **as a result of the sexual abuse you experienced**

	Never	Occasionally	Fairly often	Very often
Sexual problems	○	○	○	○
Flashbacks	○	○	○	○
Nightmares	○	○	○	○
Fear of men	○	○	○	○
Fear of women	○	○	○	○
Bad thoughts or feelings during sex	○	○	○	○
Feeling that things are unreal	○	○	○	○
Low sex drive	○	○	○	○
Sexual overactivity	○	○	○	○
Not feeling satisfied with your sex life	○	○	○	○
Having sex that you did not enjoy	○	○	○	○
Being confused about your sexual feelings	○	○	○	○
Sexual feelings when you should not have them	○	○	○	○

For the following, please indicate how often in the past 3 months you have experienced each symptom **as a result of the sexual abuse you experienced**

	Never	Occasionally	Fairly often	Very often
Insomnia	○	○	○	○
Restless sleep	○	○	○	○
Nightmares	○	○	○	○
Not feeling rested in the morning	○	○	○	○
Waking up in the middle of the night	○	○	○	○
Waking up early in the morning	○	○	○	○

In the past 12 months how often have you….

	Daily or almost daily	Weekly	Monthly	Less than monthly	Never
Used any tobacco product (for example, cigarettes, e-cigarettes, cigars, pipes or smokeless tobacco)	○	○	○	○	○
Had 5 or more drinks (males) or 4 or more drinks (females) containing alcohol in one day	○	○	○	○	○
Used any drugs including marijuana, cocaine or crack, heroine, methamphetamine (crystal meth), hallucinogens, ecstasy/MDMA?	○	○	○	○	○
Used any prescription medicines just for the feeling, more than prescribed, or that were not prescribed to you?	○	○	○	○	○

For the following, please indicate how much you agree with each statement

	Strongly agree	Agree	Disagree	Strongly disagree
On the whole, I am satisfied with myself.	○	○	○	○
At times I think I am no good at all	○	○	○	○
I feel that I have a number of good qualities.	○	○	○	○
I am able to do things as well as most other people.	○	○	○	○
I feel I do not have much to be proud of.	○	○	○	○
I certainly feel useless at times.	○	○	○	○
I feel that I'm a person of worth.	○	○	○	○
I wish I could have more respect for myself.	○	○	○	○
All in all, I am inclined to think that I am a failure.	○	○	○	○
I take a positive attitude toward myself.	○	○	○	○

End of Block: Trauma symptom checklist -40

Start of Block: Revised ACE

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 a way that made you afraid that you might be physically hurt?

- ○ Yes
- ○ No

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?

- ○ Yes
- ○ No

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?

- ○ Yes
- ○ No

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?

- ○ Yes
- ○ No

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?

- ○ Yes
- ○ No

Was a biological parent ever lost to you through divorce, abandonment, or other reason?

- ○ Yes
- ○ No

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 over at least a few minutes or threatened with a gun or knife?

- ○ Yes
- ○ No

Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?

- ○ Yes
- ○ No

Was a household member depressed or mentally ill, or did a household member attempt suicide?

- ○ Yes
- ○ No

Did a household member go to prison?

- ○ Yes
- ○ No

Did other kids, including brothers or sisters, often or very often hit you, threaten you, pick on you or insult you?

- ○ Yes
- ○ No

Did you often or very often feel lonely, rejected or that nobody liked you?

- ○ Yes
- ○ No

Did you live for 2 or more years in a neighbourhood that was dangerous, or where you saw people being assaulted?

- ○ Yes
- ○ No

Was there a period of 2 or more years when your family was very poor or on public assistance?

- ○ Yes
- ○ No

End of Block: Revised ACE

Start of Block: Demographic Questions

What is your age? (in years)

_____

Which of the following best describes the gender you identify as?

- ○ Male
- ○ Female
- ○ Other _____

What country do you live in?

- ○ USA
- ○ Canada
- ○ United Kingdom
- ○ Australia
- ○ New Zealand
- ○ Other (please specify) _____

I identify my ethnicity as (you may select more than one option)

- ☐ Native American
- ☐ Asian
- ☐ African American
- ☐ African
- ☐ European, Caucasian
- ☐ Hisoanic, Latinx or Spanish origin
- ☐ Maori
- ☐ Middle Eastern or North African
- ☐ Pacific Islander
- ☐ Native Canadian
- ☐ Aboriginal
- ☐ Other (please specify)

_____

What term best describes your sexual orientation?

- ○ Heterosexual/ straight
- ○ Lesbian/ gay/ homosexual
- ○ Bisexual
- ○ Uncertain
- ○ Other

What is your highest level of education?

- ○ Some school (not completed)
- ○ Completed school
- ○ Some university (not completed)
- ○ Undergraduate qualification
- ○ Postgraduate qualification

End of Block: Demographic Questions

Start of Block: Disclosure/treatment

Did you ever disclose the sexual abuse you experienced to anyone?

- ○ Yes (please specify who) _____
- ○ No

Skip To: Q73 If Did you ever disclose the sexual abuse you experienced to anyone? = No

Page Break

What was the reaction to the disclosure?

_____

Page Break

Did you ever seek any treatment for the sexual abuse you experienced?

○ Yes

○ No

Skip To: End of Block If Did you ever seek any treatment for the sexual abuse you experienced? = No

Page Break

Please specify what treatment was sought.

_____

End of Block: Disclosure/treatment

Start of Block: Block 7

Thank you for completing this survey.

If you would like to see the results of the study, the final thesis will be available from the University of Canterbury's library from 01/10/22. Search "Quantitative analysis of the similarities and differences between female versus male perpetrated sexual abuse" in the University of Canterbury thesis respository (https://ir.canterbury.ac.nz/) after the above date to find a copy of the final thesis.

Please indicate below whether you are happy for your data to be used in analyses (please note responses remain anonymous).

○ Yes, I am happy for my data to be used

○ No, I would like my data to be deleted prior to analyses

End of Block: Block 7

Appendix B

Results of the Multiple Regressions

Table B1

Relationship Between Participant Gender and Dissociation Subscale Whilst Controlling for Covariates

Variables	***β***	**95%CI *β***	***p***
Gender	0.29	0.04, 0.55	.025
Force/Pressure[a]			
Psychological Pressure	0.00	-0.31, 0.31	.991
Physical Force	0.43	0.04, 0.82	.031
Time Since Last Abuse	0.22	0.10, 0.34	<.001
Abuse Time Period	0.14	0.02, 0.26	.021
Bothered at Time	0.08	-0.05, 0.20	.220
Adverse Experiences	0.33	0.22, 0.45	<.001

[a]Comparison group = no force/pressure

Table B2

Relationship Between Participant Gender and Anxiety Subscale Whilst Controlling for Covariates

Variables	***β***	**95%CI *β***	***p***
Gender	0.43	0.18, 0.68	<.001
Force/Pressure[a]			
Psychological Pressure	0.04	-0.26, 0.34	.808
Physical Force	0.35	-0.03, 0.72	.068
Time Since Last Abuse	0.21	0.09, 0.33	<.001
Abuse Time Period	0.11	-0.01, 0.22	.067
Bothered at Time	0.10	-0.02, 0.22	.095
Adverse Experiences	0.37	0.26, 0.49	<.001

[a]Comparison group = no force/pressure

Table B3

Relationship Between Participant Gender and Depression Subscale Whilst Controlling for Covariates

Variables	*β*	95%CI *β*	*p*
Gender	0.42	0.17, 0.66	.001
Force/Pressure[a]			
Psychological Pressure	0.10	-0.20, 0.40	.496
Physical Force	0.40	0.03, 0.77	.035
Time Since Last Abuse	0.09	-0.03, 0.21	.137
Frequency of Abuse	-0.16	-0.36, 0.05	.138
Abuse Time Period	0.29	0.00, 0.50	.006
Bothered at Time	0.05	-0.07, 0.17	.425
Adverse Experiences	0.42	0.30, 0.53	<.001

[a]Comparison group = no force/pressure

Table B4

Relationship Between Participant and Perpetrator Gender and Interpersonal Problems Subscale Whilst Controlling for Covariates

Variables	*β*	95%CI *β*	*p*
Gender	0.28	-0.01, 0.56	.058
Perpetrator Gender			
Males Only[a]	-0.31	-0.64, 0.03	.073
Females Only[a]	-0.22	-0.63, 0.20	.312
Females Only[b]	0.09	-0.25, 0.44	.595
Force/Pressure[a]			
Psychological Pressure	0.17	-0.16, 0.49	.312
Physical Force	0.23	-0.17, 0.63	.261
Time Since Last Abuse	0.13	0.00, 0.25	.050
Abuse Time period	0.16	0.04, 0.28	.012
Bothered at Time	0.10	-0.03, 0.23	.123
Adverse Experiences	0.35	0.22, 0.48	<.001

[a]Comparison group = both males and females
[b]Comparison group = males only
[c]Comparison group = no force/pressure

Table B5

Relationship Between Participant Gender and Sexual Abuse Trauma Subscale Whilst Controlling for Covariates

Variables	*β*	95%CI *β*	*p*
Gender	0.38	0.13, 0.63	.003
Force/Pressure[a]			
Psychological Pressure	0.12	-0.17, 0.42	.410
Physical Force	0.49	0.12, 0.86	.010
Relationship to Perpetrator[b]			
Friend/acquaintance	-0.11	-0.41, 0.19	.456
Relative	0.09	-0.33, 0.51	.666
Time Since Last Abuse	0.19	0.07, 0.31	.002
Frequency of Abuse	-0.08	-0.29, 0.12	.421
Abuse Time Period	0.23	0.03, 0.44	.026
Bothered at Time	0.09	-0.03, 0.21	.153
Adverse Experiences	0.37	0.26, 0.49	<.001

[a]Comparison group = no force/pressure
[b]Comparison group = stranger

Table B6

Relationship Between Participant Gender and Sex Problems Subscale Whilst Controlling for Covariates

Variables	*β*	95%CI *β*	*p*
Gender	0.11	-0.15, 0.36	.413
Force/Pressure[a]			
Psychological Pressure	0.25	-0.06, 0.56	.116
Physical Force	0.47	0.08, 0.85	.018
Time Since Last Abuse	0.19	0.06, 0.31	.003
Abuse Time Period	0.30	0.08, 0.51	.007
Bothered at Time	0.02	-0.10, 0.15	.739
Adverse Experiences	0.41	0.29, 0.53	<.001

[a]Comparison group = no force/pressure

Table B7

Relationship Between Participant Gender and Sleep Problems Subscale Whilst Controlling for Covariates

Variables	*β*	95%CI *β*	*p*
Gender	0.23	-0.02, 0.48	.070
Force/Pressure[a]			
Psychological Pressure	-0.12	-0.43, 0.19	.447
Physical Force	0.44	0.06, 0.83	.024
Relationship to Perpetrator			
Friend/acquaintance	-0.05	-0.36, 0.26	.761
Relative	0.06	-0.38, 0.49	.802
Abuse Time Period	0.10	-0.02, 0.23	.107
Bothered at Time	0.07	-0.06, 0.19	.291
Adverse Experiences	0.42	0.30, 0.54	<.001

[a]Comparison group = no force/pressure

Table B8

Relationship Between Participant and Perpetrator Gender and Total Trauma Symptoms Whilst Controlling for Covariates

Variables	*β*	95%CI *β*	*p*
Gender	0.32	0.05, 0.59	.019
Perpetrator Gender			
Males Only[a]	-0.13	-0.44, 0.19	.428
Females Only[a]	-0.03	-0.42, 0.36	.873
Females Only[b]	0.09	-0.23, 0.42	.563
Force/Pressure[a]			
Psychological Pressure	0.08	-0.22, 0.38	.591
Physical Force	0.46	0.09, 0.84	.016
Time Since Last Abuse	0.17	0.05, 0.29	.005
Abuse Time Period	0.17	0.05, 0.28	.005
Bothered at Time	0.07	-0.04, 0.19	.235
Adverse Experiences	0.41	0.29, 0.53	<.001

[a]Comparison group = both males and females
[b]Comparison group = males only
[c]Comparison group = no force/pressure

Table B9

Relationship Between Perpetrator Gender and Drug and Alcohol Use Whilst Controlling for Covariates

Variables	*β*	95%CI *β*	*p*
Perpetrator Gender			
Males Only[a]	-0.51	-0.86, -0.16	.004
Females Only[a]	-0.12	-0.56, 0.32	.579
Females Only[b]	0.38	0.03, 0.74	.035
Force/Pressure[c]			
Psychological Pressure	0.20	-0.14, 0.54	.244
Physical Force	0.66	0.25, 1.06	.002
Time Since Last Abuse	0.19	0.04, 0.34	.011
Age at Occurrence	0.01	-0.14, 0.16	.927

[a]Comparison group = both males and females
[b]Comparison group = males only
[c]Comparison group = no force/pressure

Table B10

Relationship Between Participant Gender and Self-esteem Whilst Controlling for Covariates

Variables	*β*	95%CI *β*	*p*
Gender	0.32	0.05, 0.58	.018
Force/Pressure[a]			
Psychological Pressure	-0.18	-0.51, 0.16	.295
Physical Force	0.03	-0.39, 0.44	.900
Frequency of Abuse	0.12	-0.11, 0.35	.314
Abuse Time Period	0.01	-0.22, 0.24	.943
Bothered at Time	0.01	-0.12, 0.15	.827
Adverse Experiences	0.37	0.24, 0.50	<.001

[a]Comparison group = no force/pressure