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Child Sexual Abuse and Subsequent Offending and Victimisation: A 45-year Follow-up Study

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EXECUTIVE SUMMARY

This report presents the findings of research which aimed to examine the association between child sexual abuse (CSA) and offending and revictimisation later in life. The literature suggests that a high proportion of offender and victim population groups report a history of CSA. Although these retrospective studies, particularly among the offending population whose motives may be questionable, have been heavily criticised, few prospective studies exist and the few that do suffer from various methodological flaws. This study overcomes many methodological limitations to address fundamental empirical and clinical questions; namely, do victims of CSA go on to perpetrate offences, specifically of a sexual nature.

The research utilised a prospective design through data linkage. This involved linking all contemporaneous records of forensic examinations on children for whom the experience of sexual abuse was medically confirmed between 1964 and 1995 to police and psychiatric databases up to 45 years later. CSA cases were compared to similar aged peers, drawn at random from the Australian Electoral Commission, who also were linked to the same databases to determine the nature and extent of differences.

The research followed up 2759 CSA cases and 2677 comparisons from the general population in Victoria on offending and victimisation outcomes. Specifically it examined:

1) The nature, frequency and outcomes of contact with the police for a range of offences as an offender or victim

2) Differences between CSA victims and non-CSA peers on a range of offences as an offender or victim

3) Gender differences among CSA victims on a range of offences as an offender or victim

4) The mediating role of sexual abuse factors and mental illness

The results revealed that CSA victims were 1.43 times more likely than peers from the general population to have contact with the police for any matter, with a higher proportion of contact accounted for the reporting of being a victim of crime. Abused males were 2.2 times higher than abused females to have contact with the police for committing an offence or reporting being a victim. Although the majority (77%) of CSA victims did not have a criminal history record, those that did had a higher number of charges, convictions and custodial sentences, and offended to an older age compared to the general population. CSA victims were almost 5 times more likely to be charged with any offence, and both male and female victims were significantly more likely than their non-abused counterparts to be charged with all types of offences, with strongest associations found for sexual (OR = 7.6) and violent (OR = 8.2) offences. Although CSA males were significantly more likely than their female abused counterparts to commit a violent offence, there was no gender difference for homicide. The majority (95%) of male CSA victims did not have a sexual offence charge; however, male victims were 8.2 times more likely than male comparisons to be charged with any sexual offence. This difference was largely accounted for by males sexually abused around the age of 12 years. Older age at abuse was the only sexual abuse variable found to have predictive utility, and presence of mental illness was found to increase offending by more than 3

times. The majority (64 %) of CSA victims did not report a subsequent victimisation experience; however, they were 1.14 times more likely than their general population peers to do so, and reported a significantly higher number of separate incidents of victimisation. With the exception of theft and bad public behaviour, CSA cases were significantly more likely than the general population to be a victim of a range of offences, namely sexual (OR = 5.3), threat of violence (OR = 4.2) and violent (OR = 2.6) offences. While abused males were 7 times more likely to report a sexual assault than males in the general population, abused females were significantly more likely to have been sexually revictimised.

This prospective study overcame many limitations of previous studies by examining a large and complete cohort of CSA victims having large enough power to detect differences in low base rate offences of sex crimes and homicide. However, this study was not without its own limitations, namely the inability to control for confounding factors such as the experience of polyabuse during childhood which may affect some of the findings. The reliance upon official police records is likely to underrepresent the number of offences committed and victimisations experienced; however, utilising a comparison sample subjected to the exact same methods of measurement increases confidence in the significant associations found.

The implications of this study are primarily that CSA victims:

1. Do not generally progress to commit any offence.

2. Do not generally progress to commit a sexual offence, except for boys sexually abused during adolescence;

3. Present a significantly greater risk, relative to the general population, to commit a range of offences.

4. Are generally not victims of subsequent crimes;

5. Are at greater risk, than the general population, for being a victim of a range of crimes.

In conclusion, this research highlights the importance of ongoing population-based efforts of primary intervention required to attempt to reduce childhood sexual abuse. For those who are sexually abused and receive official or clinical attention, interventions must be targeted, particularly at boys sexually abused at an older age, in attempt to reduce the risk of offending or subsequent victimisation. CSA victims may benefit from interventions aimed at positive sexuality and efforts to manage associated offence risk. This research confirms the value in enquiring about history of CSA among offending and victim populations and addressing unresolved trauma as part of therapeutic rehabilitation.

CHAPTER 1: INTRODUCTION

Since the 1980s, childhood sexual abuse (CSA) has gained much public awareness and acknowledgment that it indeed unfortunately occurs in our communities at an alarming rate of up to 30 percent for CSA of any kind, to a prevalence interval between 5 and 10 percent for more severe forms involving penetration (Fergusson & Mullen, 1999). Compelling evidence suggests that CSA is a pervasive problem associated with an array of short- and long-term deleterious outcomes, including emotional, behavioural and social dysfunctions (for reviews see Andrews, Corry, Slade, Issakidis, & Swanston, 2004; Fergusson & Mullen, 1999; Gilbert et al., 2009; Paolucci, Genuis, & Violato, 2001). Of considerable social interest is the relationship between CSA and offending, in particular sexual offending, in attempt to explain the development of offending behaviour in general and sexual deviance more specifically. While some victims may follow a trajectory that leads to offending behaviours, others seem to get caught in the perpetual experience of being victimised. However, studies on the relationship between CSA, offending behaviour, and revictimisation have suffered from a lack of empirical sophistication seen in more recent research on the relationship between CSA and psychopathology. This has left a large gap in our understanding of the fundamental epidemiological questions pertaining to how many sexually abused male and female children end up offending, and, specifically, how many commit sexual offences, or experience revictimisation. To further understand the relative risk of offending and victimisation rates among CSA victims, it is important to compare them to people drawn from a non-abused population to determine whether CSA poses a risk factor for offending and victimisation. If indeed a

significant relationship exists between CSA and offending or victimisation, the next step in empirical research is to determine factors that differentiate those within the CSA population who exhibit the deleterious outcome from those who do not. Although these are fundamental and important empirical and clinical questions, no study has adequately examined all, let alone any, of them to date.

Research Aims

The primary aim of this prospective study is to examine the relationship between CSA and subsequent criminal offending, and victimisation. This study overcomes many limitations of previous studies that have investigated the long-term outcomes of CSA by conducting a follow-up study of a large and representative sample of both male and female victims with a matched comparison group. This will allow the determination of rates and risks in the perpetration or victimisation of a range of offences, including those of a low base rate such as sexual offences. More specifically this study will examine:

1) Whether victims of CSA are more likely to come into contact with the law for criminal charges and the nature of judicial outcomes compared to similar aged peers in the general population.

2) The rate and nature of offences among CSA victims; and to determine whether victims of CSA are at a higher risk of committing sexual and non-sexual offences than those without substantiated histories of abuse; and to examine gender differences in the nature of offending.

3) The rate and nature of victimisation (sexual and non-sexual forms) among CSA victims; and to determine whether victims of CSA are at a higher risk of

experiencing (re)victimsation compared to the general population; and to examine gender differences in the nature of victimisation.

4) Whether abuse-specific characteristics (e.g. penetration vs. non-penetration) are related to offending outcomes.

5) Whether mental illness increases the risk of criminal outcomes in victims of CSA compared to CSA victims who do not have a criminal history.

CHAPTER 2: LITERATURE REVIEW

Overview

This review will first examine retrospective studies on the reporting of child sexual abuse (CSA) within offending populations, highlighting the significant limitations of such a methodological approach and presenting the benefits of alternative prospective designs. This will lead to a detailed summary of the few, more sophisticated, prospective studies on the subsequent offending behaviour of victims of abuse, with concluding remarks on the limitations of these studies. While a review of the theory underpinning the abuse to abuser cycle is beyond the scope of this paper, possible mediating mechanisms of sexual abuse variables and mental illness will be briefly explored to explain, in part, the relationship between CSA and offending. The next section of this review will report on the equally significant relationship between CSA and the perpetuating experience of subsequent victimisation. Given the limitations of retrospective studies, greater emphasis will be placed upon reporting of prospective studies in this field. Finally, this review will conclude with a summary of the current state of the literature, highlighting the areas that need to be addressed.

Child Sexual Abuse and Offending

Reported History of Child Sexual Abuse in Offenders

Since Curtis (1963) raised clinical concern that abused children would “become tomorrow’s murderers and perpetrators of crimes of violence” (p. 386), the intergenerational transmission of violence where abused children develop to

become abusers has been one of the most commonly held beliefs in both the scholarly and popular literature (Widom, 1989a & b). More specifically, a proportion of authors in the abused to abuser literature have championed the notion that the type of maltreatment experienced in childhood influences a similar method of abuse perpetrated later, with sexual abuse victims progressing to become sexual abusers (Bagley, Wood, & Young, 1994; Dutton & Hart, 1992; Ford & Linney, 1995; Ryan, 1989). Indeed retrospective studies on convicted child sex offenders indicate up to 75 percent report a history of CSA, with Hanson and Slater's (1988) review of 18 studies showing that 33 percent of male child sex offenders had reported experiencing any sexual contact during childhood. More broadly, a study of 100 incarcerated males found 59 percent reported some form of CSA (Johnson et al., 2006). While such studies lack a comparison group to provide a base rate of reported sexual abuse in a non-offending population, these rates are higher than Fergusson and Mullen's (1999) meta-analyses of the cumulative prevalence rate of any form of CSA, which revealed that the prevalence among males who were the victims of child sexual abuse was from 10 to 20 percent. The obvious flaw with the hypothesis that the nature of abuse experienced in childhood is subsequently perpetrated, however, is that females have disproportionately higher rates of CSA than their male peers, yet the majority (over 90 percent) of child sex offenders are males (Fergusson & Mullen, 1999). Moreover, retrospective studies that compare the reported CSA histories of sex offenders to non-sex offenders provide an account that reported experiences of sexual abuse may not be entirely synonymous with subsequent sex offending. In Jespersen, Lalumiere and Seto's (2009) meta-analysis of 17 studies comparing sex offenders with non-sex offenders on sexual abuse histories, all but one study reported

greater odds of sex offenders reporting having been sexually abused compared to non-sex offenders. However, out of these 16 studies, only 7 yielded significant odds ratios, ranging between 2.49 to 15.00, suggesting that the majority (10) of the studies examined did not find a significant difference in reporting histories of sexual abuse between sex and non-sex offenders. Nevertheless, in their meta-analysis of the 17 studies, Jesperson, Lalumiere and Seto calculated a significant weighted average odds ratio of 3.36, suggesting that sex offenders were three times more likely to report a history of sexual abuse than non-sex offenders. Furthermore, they found no difference in the reporting of sexual abuse between adult rapists and child molesters. Others (Benoit & Kennedy, 1992; Hanson & Slater, 1988) have argued that the nature of the abuse experienced in childhood does not lead to the same method of offending, but rather that childhood abuse is simply associated with offending behaviour in general. This supposition is supported, in part, by the unequivocal findings that the vast majority of sex offenders have a diverse criminal offending repertoire, including non-sexual offences (Hanson & Bussiere, 1998; Smallbone & Wortley, 2004; Soothill, Francis, Sanderson, & Ackerley, 2000). Taken together, while male prisoners in general, and sex offenders in particular, report a higher incidence of childhood sexual abuse relative to prevalence rates found in the general community, the question of whether male sex offenders have an increased rate of sexual abuse history compared to non-sex offenders has yielded mixed findings.

The majority of studies have focused on the incidence of sexual abuse among male offenders due to the over-representation of sex crimes perpetrated by males, and the commonly held view that males externalise their abuse to aggressive acts,

while females internalise their abuse to psychopathological states. However, an increasing number of studies over the past 15 years have begun to examine the characteristics of female sex offenders, including incidence of reported histories of CSA. According to the United States Bureau of Justice Statistics, 25.5 percent of state prison female inmates self identified as having experienced sexual abuse prior to the age of 18 years (Harlow, 1999). In an Australian study (Nathan & Ward, 2002) with a very small sample size, 75 percent of the 12 female sex offenders examined for a pre- or post- release evaluation reported a history of CSA. Several studies (Fromuth & Conn, 1997; Kaplan & Green, 1995; Mathews, Hunter, & Vuz, 1997; Miccio-Fonseca, 2000; Pothast & Allen, 1994), using a variety of samples including incarcerated offenders to anonymous university students, have demonstrated that female sexual offenders reported experiencing CSA at a higher frequency than other groups, including other offending incarcerated females, male sex offenders and non-sex offending female students.

Limitations of Retrospective Studies

Retrospective studies involve the self-reporting of earlier experiences usually at the same time outcome variables are measured. This common methodological approach has been criticized for a range of significant limitations, three of which will be reviewed here:

1) sampling bias or representation of the population;
2) reporting bias or the veracity of recollections of past events; and
3) cross-sectional and correlational

Most sexual abuse and offending research involve samples drawn from offender populations, typically incarcerated male felons. These specialised, and to a large

extent convenient, populations can be regarded as a biased sample of overall population groups, as the extent to which such samples represent the larger non-incarcerated offender population is unknown. It is well documented that most sexual offences go unreported, and of those that are reported, most do not proceed past the investigation stage to court (ABS, 2004; Cross, Walsh, Simone, & Jones, 2003; Fitzgerald, 2006; San Lazaro, Steele, & Donaldson, 1996). Among the small proportion of sexual offences tried at court, the attrition rate is high, with approximately 40 percent of defendants in an Australian court being found guilty, with half of those receiving a sentence of imprisonment (Fitzgerald, 2006). As such, incarcerated sex offenders may not be representative of the general pool of men who sexually abuse children. In addition, the application of findings from male sex offenders to represent the broader population of both female and male victims of child sexual abuse is even less clear.

The reliance upon unsubstantiated retrospective recall of CSA reports raises the issue of recall bias and the veracity of claims (Widom, Raphael, & DuMont, 2004). Although strong evidence indicates that within the general population, people, particularly males, tend to fail to report their past experiences of CSA (Fergusson, Horwood, & Woodward, 2000; Hardt & Rutter, 2004; Widom & Morris, 1997; Williams, 1994), the opposite effect of false positive claims of CSA among the offending population is plausible. Reporting bias is of particular concern among an offender population as external motivation to report a history of CSA in attempt to elicit sympathy and/or receive a lenient sentence cannot be excluded (Falshaw, 2005). Due to these inaccuracies, retrospective studies may potentially produce a

high rate of false positive results in the association between offending and a history of CSA.

An equally problematic limitation of retrospective cross-sectional studies pertains to the inability to reliably determine the temporal ordering of child abuse exposure in relation to outcomes (Gilbert et al., 2009; Widom et al., 2004). As such, meaningful analyses on the potential cause and effect nature between CSA and offending behaviour cannot be achieved. At best, retrospective cross-sectional studies only allude to a correlational nature of a reported history of CSA and offending behaviour. However, despite findings that up to 75 percent of sex offenders report a history of experiencing sexual abuse in childhood (Hanson & Slater, 1988), the reverse cannot be implied that 75 percent of victims will subsequently perpetrate a sexual offence. As such, retrospective cross-sectional studies are an inadequate inference in support of the supposition that sexual abuse victims progress to perpetrate sexual offences.

Prospective studies that ascertain the contemporaneous occurrence of CSA, and follow-up these children over time to determine a range of outcomes, offer numerous methodological advantages. These include, establishing temporal order, causal priority, control of confounding variables, avoidance of recall bias and sampling bias by the selective inclusion of participants based on outcomes (Fergusson & Mullen, 1999; Gilbert et al., 2009). These methodological strengths overcome many limitations of retrospective studies; however, the longitudinal and economic requirements of prospective studies raise practical challenges that are seldom met, resulting in a very limited number of prospective studies in general

and specifically to the field of CSA. An alternative cost and time effective methodology that maintains some of the features of prospective designs involve the linkage of official records of substantiated sexual abuse to a range of contemporaneous administrative databases (e.g., police, psychiatric and coronial records). However, it is recognised that reliance on official records may still be subject to systematic biases, such as overrepresentation of severe forms of abuse and family dysfunction, affecting the representativeness of victims of CSA (Fergusson, Boden, & Horwood, 2008; Fergusson & Mullen, 1999; Gilbert et al., 2009). Nevertheless, this approach has utility as the sequencing of events can be established and epidemiological investigations on the risks of CSA at the severe end of the spectrum can be answered with greater confidence.

Subsequent Offending in Child Sexual Abuse Victims

Prospective studies provide a different perspective, as these designs allow for the investigation of how many victims subsequently offend (or alternative outcome variable of interest), providing a more accurate picture of the association between CSA and offending. This section reviews in greater detail the few studies that have attempted to examine this association, with concluding comments on the overall limitations in these studies.

In Burgess, Hartman and McCormack's (1987) descriptive prospective study of 34 of 66 sexually abused children interviewed 6 to 8 years after their abuse, the followed up youth (mean age of 17 years) were divided into two groups. The sexual abuse characteristics of group one (mix of female and male victims) compared to group two (all male victims) involved less severe forms of sexual

abuse, for a shorter duration and the victims were of younger age; they also remained in school, came from stable family environments and were less likely to report heavy illicit substance use. When comparing abused youth with non-abused students, the authors reported no difference in group one with respect to delinquent and criminal activity; however, failed to mention if such behaviour existed and to what degree. The more severe group two, however, was found to be significantly more aggressive and in trouble with the law, with all 17 cases being arrested compared to the two out of 13 arrests in the non-abused group. The method on ascertainment of the arrest information (e.g., self report or official criminal records) was not reported. Of considerable alarm within this small sample size, two male CSA victims had been convicted for sexual assault, and two for attempted or completed homicide prior to the age of 18 years.

Another descriptive follow-up study by Salter and colleagues (2003) involved the UK nation-wide collection of records on 224 males who had received medical attention for sexual abuse (mean age 11 years) between the years 1980 and 1992. A nation-wide search of official criminal records was performed in 1999, some 7 to 19 years after the initial abuse, when the subjects were aged between 18 and 34 years. Of the 224 male victims, the majority (88%) were not found to have committed a sexual offence, with 7 of the 26 sexually perpetrating cases receiving an official caution or conviction for their offence. Information on 17 of these cases revealed all but one had offended against children. Within group analyses found that victims who sexually offended were more likely to have also been cautioned or convicted for other violent offences (23%) than non-sex offending victims (12%), and had on average committed more crimes per person overall (6.1 vs. 4.2).

Unfortunately, from the reported figures one cannot deduce the basic frequencies for criminal contact and offence categories in the sample.

Siegel and Williams (2003a) retrieved information on 206 cases of sexual abuse (67% penetration) against females aged up to 12 years from one American city emergency room who underwent forensic examination during 1973 and 1975, and matched these cases to 205 non-abused girls from the same emergency room on age, race, and date seen. Some 20 years later in 1995, subjects were cross referenced with marriage certificate applications for name changes and subsequently obtained official histories of arrests for all cases through a search of the courts computerised system. While the majority of cases were not found to have an official arrest record, victims were nearly two times more likely than matched controls to have been arrested as adults (20.4% vs. 10.7%). The arrest rate for violent (9.3% vs. 4.4%) and property (9.3% vs. 5.4%) offences were similarly around two times greater than controls; however, these offence groups were not operationalised and is therefore unknown if violent offences included those of a sexual nature. The largest difference in adult offending between CSA victims and their non-abused counterparts was in arrests for drug offences, at 7.8 and 1.5 percent respectively.

In Widom and colleagues' studies on 908 substantiated cases of children abused between 1967 and 1971 matched to 667 non-abused cases, all subjects were followed up through a search of local, state and federal arrest records in 1988 (Widom & Ames, 1994) and again in 1994 (Widom & Maxfield, 2001). The abused

group were all victimised prior to the age of 11 years and were mixed to include physical abuse, neglect and sexual abuse, with sexual abuse cases consisting of the lowest number at 125 cases, and predominately comprised of females (84%). While the majority of abused and non-abused cases had no juvenile or adult criminal record, a higher proportion of abused cases compared to the non-abused group were arrested as a juvenile (27% vs. 17%) and in adulthood (42% vs. 33%) (Widom & Maxfield, 2001); however, whether these differences reached statistical significance was not reported. A higher proportion of males than females in both abused and non-abused groups were arrested for violent offences, including rape and sodomy; however, a significant difference was only established for abused females relative to their non-abused counterparts. An analysis by abuse type revealed that sexually abused victims were least likely, and physically abused most likely, to have been arrested for a violent offence; however, as Widom and Maxfield acknowledged, this result is likely an underrepresentation due to the low number of male CSA victims included in their study. Moreover, sexual and non-sexual violent offending was not distinguished. However, in her earlier study, Widom and Ames (1994) found 3.9 percent of abused children compared to 0.4 percent of controls were arrested for a violent sex crime, and this was largely attributed to the physically abused group.

Although these follow up studies offered a number of methodological strengths that overcame many of the limitations of retrospective studies to arrive to the similar conclusion that the majority of CSA victims do not go on to commit crimes, they need to be considered within their own common shortcomings. Of greatest relevance, none of these studies adequately examined the association between

CSA and subsequent sexual offending due to a combination of the following limitations.

1) Adequate sample size is critical to be of sufficient power to detect prevalence and differences of low base rate events such as sexual offending and homicide; however, these studies employed relatively small samples, which were largely female and are far less likely to commit serious offences.

2) Despite the apparently lengthy follow up periods, the subjects were relatively young (aged to mid 30s), falling short of capturing the peak period for being convicted for sex offences.

3) Even though most of the studies employed a non-abused, control sample allowing for the drawing of comparisons to determine differences, these studies were largely descriptive and did not utilise the benefits of a control group.

4) Finally, the invaluable resource of criminal records was also not used to their full potential, as only a limited range of offences were examined as outcomes, or were combined to form broad groups that did not distinguish sex crimes from other violent offences.

Mediating Factors in the Relationship between Child Sexual Abuse and Offending

Findings from prospective studies underscore the fact that not all CSA victims develop problem behaviours in the form of criminal activity. This raises important

questions of why does one victim of childhood sexual abuse and not another develop problem behaviours, and what factors interact with CSA to mediate or moderate the subsequent expression of negative or positive outcomes. Investigating possible mechanisms underlying offending behaviour following CSA is of great relevance to establish a framework for understanding the apparent associations, and to identify areas of target for intervention. Although a review of all the possible mechanisms that may lead to an increase in criminogenic factors is beyond the scope of this review and study, the role of abuse characteristics and mental illness will be briefly examined.

The dose-response hypothesis posits that the level or severity of abuse dictates the degree of consequences, with abuse of greater severity resulting in a greater response (Fergusson & Mullen, 1999). Accordingly, it would be expected that CSA involving multiple incidents of penetration by multiple perpetrators over an extended period would result in poorer outcomes than a one-off non-contact sexual abuse incident. However, empirical evidence from prospective studies in support of this has been limited and inconsistent, with some (Burgess et al., 1987) finding a positive association between severity of abuse and offending behaviours, while others (Salter et al., 2003) found no difference. The child abuse literature is also divided on which age or developmental period at which abuse occurs exerts the greatest deleterious impact. Some theorists and researchers (Barker-Collo & Read, 2003; Manly, Kim, Rogosch, & Cicchetti, 2001) argue earlier age at abuse is of greater detriment, advocating abuse has damaging effects upon achieving subsequent developmental milestones. In contrast, others (Browne & Finkelhor, 1986; Kendall-Tackett, Williams, & Finkelhor, 1993; Thornberry, Ireland, & Smith,

2001) postulate older age at abuse is of greater detriment, arguing younger age acts as a buffer for abuse due to a young child's undeveloped cognitive abilities to comprehend the implications of being abused (Finkelhor, 1995). Moreover, sexual victimisation at an older age during the psychosexually sensitive period of adolescence may have a greater impact on behavioural problems. While there is some evidence indicating older age at abuse is associated with externalising problems or delinquency in youth (Burgess et al., 1987; Kaplow & Widom, 2007; Thornberry et al., 2001), whether these findings are specifically applicable to adult victims of CSA in terms of criminal behaviour is unknown.

The association between mental illness and offending has received a great deal of attention, with a review by Andrews and Bonta (2003) reporting between 23 and 100 percent of offenders are diagnosed with a mental disorder, indicating a high degree of psychopathology within this population. Indeed studies from Victoria, Australia support this association, finding 84 percent of incarcerated females met criteria for at least one psychiatric diagnosis (Tye & Mullen, 2006), and those diagnosed with schizophrenia had significantly higher rates for criminal convictions (3.2 times), particularly for violent offences (4.8 times), compared to a matched control (Wallace, Mullen, & Burgess, 2004). There is also an over-representation of mental illness among CSA victims (see reviews by Andrews et al., 2004; Beitchman et al., 1992; Browne & Finkelhor, 1986; Fergusson & Mullen, 1999; Finkelhor, 1990; Gilbert et al., 2009; Paolucci et al., 2001; Putnam, 2003). Cutajar and colleagues' (2010a; 2010b) 43-year follow up study on a large cohort of CSA victims has provided compelling evidence that CSA is a substantial risk factor for a range of mental disorders, with victims being 3.65 times more likely

than the general population to have contact with public mental health services for their illness. Mental illness in victims of CSA may increase the risk of offending; however, no study utilizing prospective methodologies has yet investigated this interaction by linking these three important factors together.

Child Sexual Abuse and Re-victimisation

Another well documented and concerning long term outcome of CSA pertains to being sexually victimised again in adolescence and/or adulthood (for reviews see Beitchman et al., 1992; Classen, Palesh, & Aggarwal, 2005; Noll, 2005; Roodman & Clum, 2001). Again, these studies tend to be retrospective in nature and focus on the sexual re-victimisation of women employed from convenient samples at college or clinical sites. As such, the sexual re-victimisation of adult male CSA victims tends to be a neglected area that requires empirical exploration. However, results from large community studies indicate that both males and females who report an adult experience of sexual assault, or general interpersonal violence, were more likely to report a history of CSA (Briere & Elliott, 2003; Elliott, Mok, & Briere, 2004). Nevertheless, retrospective studies fail to answer how many CSA victims experience subsequent re-victimisation. Again, only a few prospective studies exist to answer this, and their findings are generally limited to sexual re-victimisaiton of the female victim population.

An Australian study on 183 substantiated cases of CSA followed up six years later revealed 17 percent of youth had further substantiated notifications for further CSA (Swanston et al., 2002); however, this study lacked a comparison group, and

gender differences were not distinguished. An American study followed up and interviewed 74 out of 84 confirmed intrafamilial female CSA victims seven years after their initial assessment, and found 20.9 percent reported experiencing rape or sexual assault compared to 10 percent of comparisons (Noll, Horowitz, Bonanno, Trickett, & Putnam, 2003). Although CSA victims were twice as likely to be raped as non-abused females in the general population, this difference did not reach significance. However, CSA victims were significantly more likely, at 1.6 times, to experience a physical assault. An extension of Siegel and Williams' (2003b) prospective study on 206 CSA female victims, interviewed 84 victims and 84 comparisons up to 24 years later. There were no differences between the abused and comparison groups in self reporting of sexual assault in adolescence (28.7% vs. 24.1%) and adulthood (48.3% vs. 37.9%); however this non-significant finding may be attributable to a third of the comparison group identifying they had also been sexually abused prior to 13 years of age.

Taken together, these findings suggest about a fifth and half of female CSA victims experience sexual revictimisation in youth and adulthood, respectively; however, due to the limited and flawed prospective studies it cannot be concluded that CSA among female victims poses an increased risk factor for later sexual assault.

Current State of the Literature

Taken together, research on the long-term outcomes of CSA on criminal offending and subsequent victimisation is methodologically flawed, resulting in unclear findings. The need for sound empirical methods to address the important epidemiological issues of whether victims of CSA are more likely than non-abused

members of the general population to become offenders and perpetrate a range of offences, or experience a range of offences as a victim, and the magnitude of such risks is long overdue. This issue appears to be more salient regarding the relationship between male victims of CSA and perpetrating a sexual offence. The impact of severity of abuse and age at abuse, as well as mental illness, upon finding an association between CSA and offending would be warranted in attempt to differentiate victims who go onto offend from those that do not.

CHAPTER 3: METHODOLOGY

Research Design – Historical Cohort Design using Data Linkage

This research is an historical cohort study of the long term effects of CSA on offending and (re)victimisation. An historical cohort design involves selecting a group of individuals defined on the basis of exposure to an event or disease of interest, in this case CSA, measured years prior to the commencement of the study for purposes other than intended for the study (Weich & Prince, 2003). The subjects are followed up over time on outcomes. This study used the linkage of routine data from the Office of Forensic Medicine (OFM) records on the medical examination of children following an allegation of sexual abuse to administrative police and psychiatric databases. This entailed 'following up' the CSA population between 13 and 45 years later by using identifiers of name, date of birth and gender of subjects to cross-reference with cases registered on police and psychiatric databases, extracting matches. To determine whether victims of CSA were at increased risk of offending and victimisation, the CSA population were compared to peers in the general population on the same outcomes. This historical cohort study, based on a large complete population of CSA victims, objectively determined through medical examination in conjunction with contemporaneous account of the abuse, whose long-term outcomes were also objectively measured (as opposed to self-report) and compared to the general population, would seem to be the strongest methodology to overcome many limitations highlighted in the literature review.

Data Sources

Data for the present study were obtained from four different sources. Two of the data sources pertain to the subjects; the study cohort constitutes the CSA database from existing OFM records, and the comparison cohort includes the Australian Electoral Commission (AEC) database. The remaining two data sources pertain to the outcomes on offending and victimisation derived from the Law Enforcement Assistance Program (LEAP) and mental health contact derived from the Redevelopment of Acute Psychiatric Information Database (RAPID). These data sources will be described in greater detail along with the definitions of key variables.

Office of Forensic Medicine: Child Sexual Assault Database

The CSA population studied was established from records collected by the OFM and later linked to existing police and psychiatric databases and compared to controls. The OFM was the statutory body that performed all forensic medical services in the State of Victoria, Australia between the years 1957 and 1995 and subsequently became the Victorian Institute of Forensic Medicine (VIFM).

As part of their responsibility, OFM provided forensic medical examinations for all cases of suspected CSA reported to the police or child welfare and protection agencies. The primary function of OFM when called upon to examine an alleged victim of sexual assault was to provide a medical opinion on whether there was evidence suggesting penetration of an orifice (e.g., torn hymen), in addition to other possible physical injuries sustained to the body in the commission of the assault. Non-contact forms of sexual abuse such as exhibitionism, voyeurism, viewing or

creating pornography and less intrusive forms of contact abuse are most unlikely to result in trauma to the genitals or receive medical scrutiny by the OFM. As such, physical findings in sexual assault examinations are generally limited to acts of penetration.

The role of OFM did not include the investigation or substantiation of the sexual abuse allegation, as this is the function of the police and child protection agencies. Therefore, the study group constitutes children examined following an allegation of sexual abuse who have received attention from child welfare services and/or the police. The term 'alleged' is implied in all references made to subjects comprising the CSA population.

The conclusiveness to which a forensic medical practitioner could determine whether penetration occurred depended, in part, upon when the examination took place relative to the last incident of sexual assault. Delays in disclosure of CSA, as often is the case, subsequently results in delays in having the examination performed. This delay, along with healing of tissue injury, may account for an absence of physical findings that does not support an allegation of penetration, particularly of the anus or mouth, at the time of the examination (Johnson, 2004). The amount of information recorded by the OFM doctors varied in level of detail from extensive, including contemporaneous account of the abuse (typically provided in an accompanying police report) and behavioural observations during examination, to the minimum of date of exam, the child's name, gender, date of birth, examination findings and opinion. The documentation of this information became systematised from 1989, achieving greater consistency in records.

Accordingly, standard information collected for each subject of the CSA database included identifying information of child's name, surname, gender and date of birth (for purpose of data matching), date of exam (enabling calculation of age which approximated to age at abuse), outcome of examination in terms of penetration or no penetration, and where possible, the characteristics (e.g., frequency, relationship to and number of perpetrators) of the sexual abuse.

For the purpose of this study, penetration was operationalised as including completed, partial or attempted insertion of a penis, finger or object into an orifice where conclusively, probably or possibly indicated in the opinion provided by the OFM doctor. All cases assessed by OFM between 1964 and 1995 were accessed from VIFM and reviewed; and every case examined was included in the current database if the following criteria were met:

1. the examinee reported any sexual assault; and,
2. the examinee was a child aged 16 years and younger

Where contemporaneous information of the CSA was collected, cases were not excluded if:

1. the child was sexually assaulted by a peer
2. the child (teenager) claimed consensual sexual intercourse with an individual five years their senior

Information of all identified OFM CSA records were entered into an excel spreadsheet and allocated a record identification number. Data integrity checks were conducted to identify and remove cases that did not meet the criteria or were duplicates. The established database comprised of a total of 2759 cases of CSA

over a 31 year period, making this the largest known population of CSA victims studied.

Australian Electoral Commission: General Population Database

One of the aims of the present study was to compare the prevalence of offending and victimisation in the CSA population with a sample matched on gender and age range from the general population with no known history of CSA. A sample of comparison subjects comprising members of the Victorian population (approximately five million) were extracted from the AEC and linked to two Victorian psychiatric databases.

The AEC was established in 1984 as an independent statutory authority to maintain the Commonwealth electoral roll. In Australia, it is compulsory for all Australian citizens aged 18-years and older to enrol on the electoral roll and vote in Federal, State and local government elections. The AEC's computerised Roll Management System contains the details of name, surname, gender and address of every adult Australian citizen. Under provisions of the *Commonwealth Electoral Act 1918*, the AEC can provide elector information for use in approved medical research. On 31 July 2008, the AEC provided the names, and gender of 5000 randomly selected Victorian citizens, comprising of 2500 males and 2500 females. Subjects were aged between 16 and 61 years with information provided on two year age bands (e.g., 20-21 years). Current age was therefore calculated as the median split of each band. Due to the absence of specific information of date of birth, data integrity checks were performed, eliminating 62 duplicates of common names (e.g., John Smith) to facilitate data matching procedures. The potential

comparison participant pool, therefore, consisted of 4938 (2457 males and 2481 females) subjects. A database was created extracting 2677 control subjects aged between 16 and 57 years matched to the CSA population on gender and age groupings.

Offending and Victimisation Outcomes: LEAP Database

The Victoria Police database was used to examine the subsequent effect of CSA on offending in general, and sexual offending in particular, as well as victimisation, using the CSA and control cohorts. The Law Enforcement Assistance Program (LEAP) is Victoria Police's administrative database in which data on crime collected by police members in the course of their work is recorded. The LEAP database records all contact of the Victorian public with the police in Victoria since March 1993, including: witnesses of crimes, victims of crimes, alleged offenders and offenders. Offending data includes nature and date of offence, guilt and conviction verdict, sentence type and duration and in some circumstances information pertaining to the victim. Information prior to 1993 is kept on Information Bureau of Records (IBR) cards, which are stored on hard copy files. Limited information on IBR prior to 1993 were recorded and linked to the LEAP database. Overall, a review of the LEAP database by Australian Institute of Criminology (2002) concluded the "…policies and procedures for the quality assurance of the data recorded are effective and the level of error in the records used to produce statistics is negligible" (p. 2). Table 1 details examples of offences included in the offence and victimisation categories and sub-categories.

Table 1: Categories of offences

Offence Categories		***Offences***
Violence	homicide	Murder, manslaughter, culpable driving resulting in death, arson resulting in death, infanticide
	violence	Attempt murder, assault, recklessly or intentionally causing injury, reckless conduct resulting in injury, armed robbery, aggravated burglary, hit and run, cruelty to animals, resist police
	weapons	Posses/use/carry controlled weapon, discharge missile, explosive offences, all firearms/ammunitions offences
	threats	Blackmail, extortion with threats, use of threatening words in public place, bomb hoax
	stalking	Breaching IVO, stalking, harassment, use telecommunications service to harass
	property damage	Criminal damage, arson, graffiti
Sexual assault	sexual	Rape, attempted rape, gross indecency, indecent assault, wilful exposure, pornography – adult or child, prostitution
	kidnapping	Kidnapping/abduction, false imprisonment
Dishonesty	deception	Obtain property by deception, handle/receive stolen goods, deal proceeds from crime, stating false name/address, make/use false documents, make false report to police, obtain financial advantage
	theft	Burglary, robbery, theft, theft of/from car, shopsteal, go equipped to steal, loiter, possess house breaking implements, trespass with intent
Drug		Use/possess/traffic/cultivate drugs, forge or alter prescriptions, driving over 0.05, under age drinking
Other	breach a legal order	Fail to answer bail, escaping, breach conditions of community disposition, bad behaviour in custody, unpaid parking fines
	bad public behaviour	Public nuisance, drunk in public, offensive public behaviour, smoking on train, no public transport ticket, speeding, running traffic lights, unlicensed driving, trespass, begs alms, bad language in public, hinder police

Mental Illness Outcomes: RAPID Database

The effects of mental illness on the relationship between CSA, offending, and victimisation were also examined and involved the use of a Victorian psychiatric database, RAPID. RAPID is a centralised state-wide patient information system accessible online only to authorised public mental health workers. Although this database was created in 2000, it contains records dating back from 1961, with a total of approximately 637,000 recorded cases. RAPID contains information on all public psychiatric in-patient admissions and, for the last 20 years, also contacts with community mental health and emergency room services. It does not include contact with the private health sector for in-patient admissions (approximately 29% of total beds in Victoria currently[1]) or out-patient services, such as private practising mental health professionals and general practitioners. Record information includes date of admission or contact and primary diagnoses.

Data Linkage Procedures

Data Linkage Procedures for CSA and Comparison Cohorts to LEAP Database

The linkage of the CSA and comparison cohorts to LEAP was conducted by a member of Victoria Police. A password protected file containing the details of the first (and second) name, surname, gender, date of birth or age range and unique record identification number of the CSA and comparison cohorts was provided to the police member. A manual search was first performed to extract exact matches on: i) date of birth, gender, name and surname for CSA cases and comparison cases that were previously identified on the RAPID database (see below). For

[1] The increasing number of psychiatric beds in the private health sector has coincided with the full deinstitutionalisation and decentralisation of mental health resources in Victoria during the 1990s.

comparison cases that did not have a specific birth date, probabilistic matches were performed using gender, age group, and full name. If this process did not yield a match, a subsequent State driver's licence check was performed to provide further information to assist with the matching procedure (e.g., date of driving offence). This information was then used to identify a match, in addition to the personal identifiers of name, age/date of birth and gender. If there was still no match on the LEAP database, it was concluded that the subject had not had contact with Victoria Police in any capacity. The extracted data was returned to the researcher in a de-identified encrypted format, with linkage to the created database based on the unique record identification number. Data integrity checks were manually performed among the CSA group to ensure no charges for an offence occurred prior to their sexual abuse. Sexual victimisation reported to Victoria Police that corresponded with time of the index CSA that led to a forensic examination were excluded from the analysis. Statistical analyses were performed on data of lifetime contact with Victoria police as an offender or victim made prior to October 6, 2009.

Data Linkage Procedures for CSA and Comparison Cohorts to RAPID

The linkage of the CSA and comparison cohorts to RAPID was conducted by the data analyst at DHS. A password protected file containing the details of the first (and second) name, surname, gender, date of birth or age range and record identification number of the CSA and control cohorts was provided to the data analyst. The data linkage procedure initially involved a deterministic approach using Structured Query Language (SQL) scripts based on identifying information to extract exact matches on: i) date of birth, gender, name and surname for CSA

cases; and, ii) gender, name and surname for control cases. Control cases were considered a match on the psychiatric database if their date of birth corresponded within the two-year age band of the identified subject. As female CSA victims may have changed their surname through their own marriage, or that of their mother's, a probabilistic approach was then performed only on the CSA female subjects. This was not executed for female comparison cases as data matching was performed soon after receiving their current details. This involved a SQL search using soundex on the identifiers of: i) first name, second name and date of birth; and ii) first name and date of birth. All extracted matches were returned to the researcher in a de-identified password protected file and entered into a combined database linking CSA and comparison data with police and psychiatric data based on the unique identification number. Data linkage on every CSA and comparison subject was also performed on psychiatric databases in 2009.

Ethical Considerations and Approvals

Ethics approval was granted by four independent committees: the Monash University Standing Committee on Ethics in Research involving Humans (for all phases of the studies), and the Human Research Ethics Committees of VIFM (for access to OFM records), Victoria Police Human Ethics Research Committee (for access to police database), and Department of Human Services (for access to psychiatric databases).

Under Victorian legislation, *Information and Privacy Act 2000,* disclosure of personal information without the individual's consent is allowed in the context of research if considered necessary for the public's interest; or, if there is no

reasonable or practical alternative to gaining their consent. Although not a legal breach of privacy, the main ethical principles of concern relate to not gaining the informed consent of all CSA subjects and the random Victorian citizens comprising the control cohort. This potentially constitutes a breach of one's privacy and confidentiality by accessing personal information routinely collected for administrative purposes other than that intended for the present study. The gaining of informed consent from almost 5500 subjects is impractical. Accessing each person would have been logistically impossible, particularly for the CSA cohort, when there are no current contact details, when they have moved out of Victoria, when incarcerated, and when victims are deceased. The exclusion of all inaccessible CSA victims would reduce the meaningfulness of the data as a description of a population. In addition, it was concluded that it would not be either ethical or appropriate to contact these victims of CSA for a number of reasons including:

a) Victims may have tried to suppress memories of their CSA and to be asked to recall would be extremely distressing to them;

b) If the sexual abuse occurred very early in childhood then victims may have no recollection of the abuse at all; or,

c) Victims may not wish others to know that they have been subjected to CSA.

As informed consent was not obtained, the current study was undertaken with the utmost regard for ensuring the privacy and confidentiality of each subject by implementing several safeguards.

Though the nature of data linkage required identifiers of name, date of birth and gender to be initially known to enable cross referencing to the police and psychiatric databases, identifiers were immediately removed from each record following completion of the data matching procedure. The police and psychiatric data matching by the authorised personnel were conducted blindly, as they were not aware of the nature of the study. In addition, information across agencies were limited to their relevant domain, where the data analyst at Victoria police had no access to the OFM or psychiatric details and similarly, the psychiatric liaison officer did not have access to OFM or police details. Exchanged data files were password protected. De-identified data were provided to the primary researcher and the police and psychiatric data was subsequently linked to the OFM data by the allocated identification number ascribed to each subject which had no connection to any of their medical (VIFM, police or psychiatric) or AEC records. All de-identified data linkage and analyses was conducted at the secure facility at the Centre for Forensic Behavioural Science, Monash University, on a stand alone computer pass word protected on three levels, namely log-on, file open, and file modification. Only the primary researcher had access to these files.

Given the safeguards implemented to minimise the risk of potential breach of privacy, the ethical bodies deemed such risks to subjects relatively small, while the benefits to the community borne from the current thesis potentially large. CSA as well as offending and victimisation are major public issues. Although CSA has often been considered a potential contributor to offending, sexual offending in particular, the little evidence in support of this has until now been methodologically suspect. By being the largest known study of medically examined CSA victims in

conjunction with contemporaneous accounts to be systematically followed up over four decades on objectively measured long term outcomes on offending and victimisation, this study will have large enough power to detect outcomes of a low base rate such as sexual offending. Moreover, by employing a case-control group derived randomly from the general population, the current study will provide the first true estimate of the nature and magnitude of the relationships between CSA and subsequent offending and victimisation and the mediating role of mental illness. As such, the findings have the potential to generate a risk assessment tool to identify CSA victims at particular risk for dire. It is believed that the public interest in understanding and possibly preventing the negative longitudinal impacts following CSA outweighs individual privacy rights. This view was supported by the four independent ethical bodies to justify the methodology employed.

Statistical Analyses

Descriptive statistics were performed to characterise the demographics of the CSA and comparison cohorts and the nature of contact with Victoria police. Offending and victimisation outcomes subsequent to CSA among the study cohort were compared to the comparison group. Groups were initially compared using *t*-tests (for continuous variable of age by grouping variable, e.g., gender) and Chi-Squared tests of association (for categorical variables, e.g., cohort by offence type). Univariately significant differences were converted into odds ratios or relative risks and 95 percent confidence intervals were calculated. Odds ratios were calculated to compare offences and victimisation in the abused cohort to the matched controls. Significance of apparent associations were determined by cross tabulations and where appropriate (if one or more cells in the 2 x 2 cross tabulations had an expected count of less than five) calculation of Fisher's exact

statistic. Within groups analyses were also conducted to determine which abuse variables and contact with psychiatric services were associated with offending. For all analyses, the significance level was set at *P* = .05. Data analyses were undertaken using SPSS version 16.0.

CHAPTER 4: RESULTS

Description of CSA Cohort

The CSA population comprised of 2759 children (2201, 79.8% females). The mean age of the CSA subjects when examined following sexual abuse allegations was 10.22 years (SD=4.4; range = 0.27-16.99 years). Almost two-thirds (1732, 63%) of the incidents involved completed, partial, or attempted penetration of an orifice by a penis, finger or object. The remaining cases (37%) reported non-penetrative sexual contact. The rate of abuse involving penetration was significantly higher for females (64.9%) than for males (55.2%; χ^2=18.06; P<0.001). Overall, almost half (735 out of 1532, 47.97%) of CSA victims were sexually abused by a relative; however, males were significantly more likely to experience extrafamilial sexual abuse than females (63.76% vs. 48.47%; $\chi^{2=}$24.90; P<0.001). The majority (1832 out of 1940, 94.4%) were sexually abused by one offender; and on more than one occasion (589 out of 950, 62.0%), with no gender differences observed. The mean age of the CSA group at follow-up was 35.58 years (SD=11.05; range 16.29-59.58), with males being 32.51 years (SD=9.26) and females 36.36 years (SD=11.33). There was no significant difference in age between the CSA and comparison groups (*t*=0.19; P=0.85). The follow up period from abuse to data collection ranged from 13.97 to 44.77 years (M= 25.36 years, SD=8.16).

Contact with Victoria Police

A record for some form of contact with Victoria Police (victim, perpetrator, witness) was found in 1671 (60.6%, 418 males and 1253 females) CSA cases, compared to

1399 (52.3%, 397 males and 1002 females) control subjects. CSA victims were 1.43 times more likely to have had contact with Victoria Police than the general population (95% CI=1.26-1.56, P=0.000). This difference held true for both male (OR=1.69, 95% CI=1.32-2.18, P=0.000) and female (OR=1.39, 95% CI=1.23-1.57, P=0.000) victims; however, male CSA victims were significantly more likely than there female abused counterparts to have had contact with the police (OR=2.26, 95% CI=1.83-2.78, P=0.000). Of the 1671 CSA victims who were registered on LEAP, 652 (39.02%) had a recorded contact for allegedly perpetrating an offence, compared to the 157 of the 1399 (11.22%) control subjects. A higher proportion of CSA (1000, 59.84%) and comparison (893, 63.83%) cases had contacted Victoria Police as a victim than as a perpetrator. Four hundred and fifty CSA victims compared to 109 control subjects had a recorded history for both being an offender and a victim. The remaining CSA and comparison cases had contact with police for informal matters (499 vs. 146), family disputes where they were the aggrieved (401 vs. 140) or perpetrating (310 vs. 78) member, or taking out (474 vs. 131) or subjected to (227 vs. 50) an intervention order that did not result in a record of a charge or as a victim of crime.

Association between CSA and Offending

Among the 652 CSA offending cases, the total number of charges laid against an individual ranged from 1 to 908, compared to 1 to 314 received by their counterparts among the general population. The average number of charges was significantly higher for CSA cases than the comparison group (31.59 vs. 19.18, *t*=2.11, P=<0.05). On average, the proportion of charges that resulted in a guilty

verdict was 73.24% for CSA victims and 68.68% for the comparison group. 114 CSA victims compared to only 14 counterparts from the general population received a custodial sentence. Sentence length ranged up to 204 months for CSA victims compared to 72 months among the control group; however, there was no significant difference in the average length of the number of months served (13.19 vs. 14.19, *t*=0.16, P=0.87). Limited information pertaining to ages at offending revealed no significant difference in the average age at first offence between CSA (range=8.61-51.71 years; M=21.26 years, SD=8.07) and comparison cases (range=11.22-50.83 years; M=22.33 years, SD=9.40; *t*=0.99; P=0.32). However, CSA cases (range=12.33-54.92 years; M=28.56 years, SD=9.53) were significantly older than comparisons at last recorded offence (range=11.22-52.34 years; M=25.64, SD=9.56; *t*=2.93, P=.004).

Tables 2 and 3 show the associations between CSA and offending compared to controls for all cases (Table 2) and by gender (Table 3). Among the CSA cases, 23.6% (231 males and 421 females) were found to have a lifetime record for any offence, compared to only 5.9% (87 males and 70 females) of control subjects. CSA victims were 4.97 times more likely than their peers from the general population to have been charged with an offence (95% CI 4.13-5.97, P=0.000). This difference remained significant for both male (OR=4.34, 95% CI 3.28-5.76, P=0.000) and female (OR=6.71, 95% CI 5.17-8.71, P=0.000) victims. CSA cases were significantly more likely to be charged with all types of offences compared to the general population. Of note, four CSA victims (2 males and 2 females) were charged with homicide, and although higher than the nil cases in the

Table 2. Comparison of various offence charges between all child sexual abuse and comparison subjects

Criminal offence	**Comparisons (N=2677)**		**Cases (N=2759)**		**OR**	**95% CI**	**P**
	n	**%**	**n**	**%**			
Any police contact	1399	52.3	1671	60.6	1.43	1.26-1.56	0.000
Criminal history	157	5.9	652	23.6	4.97	4.13-5.97	0.000
Homicide	0	0.0	4	0.1	-	-	
Sexual offences	4	0.1	31	1.1	7.59	2.68-21.54	0.000[†]
Prostitution	0	0.0	35	1.3	-	-	-
Violence	35	1.3	271	9.8	8.22	5.76-11.74	0.000
Kidnap	0	0.0	19	0.7	-	-	-
Threat of violence	13	0.5	71	2.6	5.41	2.99-9.80	0.000
Property damage	32	1.2	173	6.3	5.53	3.78-8.09	0.000
Weapons offence	21	0.8	114	4.1	5.45	3.41-8.71	0.000
Stalking	16	0.6	47	1.7	2.88	1.63-5.10	0.000
Drug offences	43	1.6	249	9.0	6.08	4.38-8.44	0.000
Deception	55	2.1	312	11.3	6.08	4.54-8.14	0.000
Theft	75	2.8	428	15.5	6.37	4.95-8.19	0.000
Breach order	26	1.0	247	9.0	10.03	6.67-15.07	0.000
Bad public behaviour	60	2.2	302	10.9	5.36	4.04-7.11	0.000

[†] Fisher's exact test

Table 3. Comparison of various offence charges between child sexual abuse and comparison subjects by gender.

Criminal Offence	**Males**						**Females**						**Abused males vs. females**
	Comparisons (n=622)		**Cases (n=558)**				**Comparisons (n=2055)**		**Cases (n=2201)**				
	n	%	n	%	OR	95%CI	n	%	n	%	OR	95%CI	P
Vic police contact	397	63.8	418	74.9	1.69*	1.32-2.18	1002	48.8	1253	56.9	1.39*	1.23-1.57	0.000
Criminal history	87	14.0	231	41.4	4.34*	3.28-5.76	70	3.4	421	19.1	6.71*	5.17-8.71	0.000
Homicide	0	0.0	2	0.4	-	-	0	0.0	2	0.1	-	-	0.18†
Sexual offences	4	0.6	28	5.0	8.16*†	2.84-23.42	0	0.0	3	0.1	-	-	0.000†
Prostitution	0	0.0	3	0.5	-	-	0	0.0	32	1.5	-	-	0.09†
Violence	26	4.2	118	21.1	6.15*	3.95-9.57	9	0.4	153	7.0	16.98*	8.65-33.36	0.000
Kidnap	0	0.0	10	1.8	-	-	0	0.0	9	0.4	-	-	0.000
Threat of violence	12	1.9	30	5.4	2.89**	1.46-5.69	1	0.0	41	1.9	38.99*†	5.36-283.69	0.000
Property damage	25	4.0	97	17.4	5.03*	3.18-7.93	7	0.3	76	3.5	10.46*	4.81-22.75	0.000

Weapons offences	16	2.6	61	10.9	4.65*	2.65-8.16	5	0.2	53	2.4	10.12*	4.04-25.36	0.000
Stalking	11	1.8	24	4.3	2.49***	1.21-5.14	5	0.2	23	1.0	4.33**	1.64-11.41	0.000
Drug offences	23	3.7	101	18.1	5.76*	3.60-9.19	20	1.0	148	6.7	7.34*	4.58-11.75	0.000
Deception	28	4.5	111	19.9	5.27*	3.42-8.12	27	1.3	201	9.1	7.55*	5.03-11.33	0.000
Theft	41	6.6	165	29.6	5.95*	4.13-8.57	34	1.7	263	11.9	8.07*	5.61-11.59	0.000
Breach order	12	1.9	103	18.5	11.51*	6.25-21.18	14	0.7	144	6.5	10.21*	5.88-17.73	0.000
Bad public behaviour	36	5.8	140	25.1	5.42*	3.70-8.03	24	1.2	162	7.4	6.72*	4.36-10.37	0.000

* 0.000
**<0.001
***<0.01
† Fisher's exact test

controls, odds ratios could not be calculated. Charges with the most marked elevation among CSA cases compared to controls were sexual offences, violent offences and breach of orders. When examining offences by gender, all offences remained significantly higher for both male and female CSA victims compared to their general population peers. Overall, the associations yielded were stronger for female victims relative to their female peers compared to males, with charges for threatening violence and assault being the strongest. Sexual offences, violent offences and breach of order remained most strongly associated with CSA among male victims. However, when comparing male and female CSA cases, sexually abused males were significantly more likely than their abused female counterparts to have been charged with all types of offences with the exception of homicide and prostitution (see Table 3).

Association between CSA and Victimisation

Among the 1000 CSA cases who were found by the police to have been victimised subsequent to their index sexual abuse during childhood, the total number of victimisation incidents reported to Victoria police ranged between 1 and 19 incidents, compared to 1 and 16 incidents reported by the 893 cases from the general population. The total average of victimisation incidents was significantly higher for CSA cases than the comparison group (2.94 vs. 1.93, t=9.88, P=0.000). Although CSA victims reported up to 9 separate incidents of sexual (re)victimisation compared to 6 separate sexual incidents among the comparison group, there was no significant difference in the average number of separate sexual victimisation incidents reported (1.62 vs. 1.45, t=0.86, P=0.39). Overall,

CSA victims were significantly younger than the population when reporting their first (re)victimisation (range=2.93-55.26 years; M=22.73 years, SD=9.32 vs. range=2.57-54.46 years; M=27.60 years, SD=9.92; *t*=10.94, P=0.000). However, there was no significant age difference between CSA victims and the general population when comparing the average age of first sexual (re)victimisation (16.79 vs. 17.81 years, *t*=0.64, P=0.53).

Tables 4 and 5 show the associations between CSA and (re)victimisation compared to controls for all cases (Table 4) and by gender (Table 5). Among the CSA cases, 36.2% (255 males and 745 females) were found to have reported to Victoria police being a victim for any offence, compared to 33.4% (247 males and 646 females) of control subjects. CSA victims were 1.14 times more likely than their peers from the general population to have been victimised for any offence (95% CI 1.02-5.97, P=0.000). This difference remained significant only for male victims (OR=1.28, 95% CI 1.01-1.61.76, P=0.038). With the exception of theft and bad public behaviour, CSA cases were significantly more likely to be victimised for all types of offences compared to the general population. Victimisation types with the most marked elevation among CSA cases compared to controls were sexual offences, threats of violence and violent offences. When examining offences by gender, male CSA cases were significantly more likely than their male counterparts from the general population to report victimisation for sexual and violent offences. Female CSA cases were significantly more likely than females from the general population to report victimisation for a sexual offence, threat of violence, violence and property damage. While the association for sexual victimisation was stronger for male CSA cases relative to their male peers compared to females, female CSA cases were significantly more likely than their abused male counterparts to be

sexually revictimised. Conversely, while male CSA cases were significantly more likely than the CSA females to be a victim of violence, the association to being a victim of violence compared to the general population was stronger for female CSA cases.

Mediating Factors between CSA and Offending

When examining the effects of the sexual abuse variables of age at abuse (before and after 12 years of age), penetration, frequency of abuse (one vs. multiple) and number of perpetrators (one vs. multiple), upon presence of criminal history among the CSA population, older age at abuse was found to be significant. Table 6 reports the frequencies, percentages and odds ratios for cluster of offences committed by CSA victims who were abused before and after the age of 12 years, according to gender. The strongest relationship yielded was for males sexually abused after the age of 12 years, being 3.33 times more likely than younger males to be subsequently charged with a sexual offence (95% CI 1.53-7.27, P=0.001). Contact with mental health services was also found to be a significant factor among CSA victims who had a criminal record. CSA victims with any recorded criminal history were 3.83 times more likely than their abused non-criminal peers to have had contact with psychiatric services. This association increased to 7.4 times for CSA victims who were charged with any sexual offence (excludes kidnapping and prostitution).

Table 4. Comparison of various revictimisations between all child sexual abuse and comparison subjects

Victimisation Type	Comparisons (N=2677)		Cases (N=2759)		OR	95% CI	P
	n	%	n	%			
Contact as Victim	893	33.4	1000	36.2	1.14	1.02-1.27	0.000
Sexual assault	42	1.6	215	7.8	5.30	3.79-7.41	0.000
Violence	154	5.8	389	14.1	2.69	2.21-3.27	0.000
Kidnap	0	0.0	8	0.8	-	-	-
Threat of violence	15	0.6	64	2.3	4.21	2.41-7.41	0.000
Property damage	175	6.5	258	9.4	1.48	1.21-1.8	0.000
Weapons offence	0	0	10	0.4	-	-	-
Stalking	16	0.6	34	1.2	2.08	1.14-3.77	0.014
Deception	15	0.6	25	0.9	1.62	0.85-3.09	0.136
Theft	740	27.6	691	25	0.88	0.78-0.99	0.030
Bad public behaviour	4	0.1	1	0.0	0.24	0.03-2.17	0.212†

† Fisher's exact test

Table 5. Comparison of various revictimisations between child sexual abuse and comparison subjects by gender.

Victimisation type	Males						Females						Abused males vs. females
	Comparisons (n=622)		Cases (n=558)				Comparisons (n=2055)		Cases (n=2201)				
	n	%	n	%	OR	95%CI	n	%	n	%	OR	95%CI	P
Contact as victim	247	39.7	255	45.7	1.28	1.01-1.61	645	31.4	745	33.8	1.12	0.98-1.27	0.000
Sexual offences	5	0.8	30	5.4	7.01*	2.70-18.21	37	1.8	185	8.4	5.01*	3.51-7.16	0.017
Violence	67	10.8	108	19.4	1.99*	1.43-2.76	87	4.2	281	12.8	3.31*	2.58-4.25	0.000
Kidnap	0	0.0	2	0.4	-	-	0	0.0	6	0.3	-	-	0.667†
Threat of violence	4	0.6	9	1.6	2.53	0.78-8.27	11	0.5	55	2.5	4.76*	2.49-9.12	0.214
Property damage	44	7.1	44	7.9	1.13	0.73-1.74	131	6.4	214	9.7	1.58*	1.26-1.98	0.183
Weapons offences	0	0	3	0.5	-	-	0	0	7	0.3	-	-	0.433†
Stalking	0	0	6	1.1	-	-	16	0.8	28	1.3	1.64	0.89-3.04	0.707

Deception	3	0.5	7	1.3	2.62	0.68-10.19	12	0.6	18	0.8	1.40	0.68-2.92	0.331
Theft	205	33	194	34.8	1.08	0.85-1.38	535	26	497	22.6	0.83***	0.72-0.95	0.000
Bad public behaviour	1	0.2	0	0	-	-	3	0.1	1	0.0	0.31	0.03-2.99	-

* 0.000
**<0.001
***<0.01
† Fisher's exact test

Table 6. Comparison of various offence charges in male and female child sexual abuse subjects by early versus late abuse

Offence	**Males (n=558)**						**Females (n=2201)**					
	CSA <12yr (n=373)		**CSA >12yr (n=185)**				**CSA <12yr (n=1184)**		**CSA >12yr (n=1017)**			
	n	%	n	%	OR	95%CI	n	%	n	%	OR	95%CI
Criminal history	129	34.6	102	55.1	2.32*	1.62-3.33	195	16.5	226	22.2	1.45**	1.17-1.79
Violent	87	23.3	71	38.4	2.05*	1.39-2.99	100	8.4	99	9.7	1.17	0.87-1.56
Dishonesty	92	24.7	80	43.2	2.33*	1.60-3.38	133	11.2	178	17.5	1.67*	1.32-2.14
Drug	52	13.9	49	26.5	2.22*	1.43-3.45	58	4.9	90	8.8	1.88*	1.34-2.65
Other	93	24.9	69	37.3	1.79**	1.22-2.62	102	8.6	135	13.3	1.62*	1.24-2.13
Homicide	0	0.0	2	1.1	-	-	0	0.0	2	0.2	-	-
Sexual	11	2.9	17	9.2	3.33**	1.53-7.27	2	0.2	1	0.1	0.58†	0.05-6.42
Prostitution	0	0.0	3	1.6	-	-	12	1.0	20	2.0	1.96	0.95-4.03

* 0.000
**<0.001
† Fisher's exact test

CHAPTER 5: DISCUSSION

Although a large emphasis in the child abuse literature has been placed upon the perpetuation of abuse, the majority of studies have been weakened, in part, by the fairly exclusive focus upon the CSA histories in male sex offenders and female rape victims, thus relying upon the retrospective reporting of sexual abuse during childhood among offender and victim population groups. Overcoming many limitations of previous studies, this 45 year follow up study on almost 3000 sexually abused children primarily aimed to investigate the rate and risk of a range of offences perpetrated or experienced by the victims as compared to similar aged peers from the general population, by linking cases to the State's criminal record system.

In general, the victims of CSA were 1.4 times more likely to have some form of contact with the police for any matter than members of the general community. It was contact with the police for being a victim of crime that accounted for a large proportion of all contacts. Overall, male CSA victims were 2.2 times more likely than their abused female counterparts to have contact with police, being significantly more likely to have contact for an offence or victimisation. Although the majority (77%) of CSA victims did not have an official criminal record, the small proportion that did come into contact with the law for criminal activity present with a severe criminal history compared to members of the general population. CSA victims received a higher number of charges, with a higher proportion of charges resulting in a guilty verdict, were more likely to receive a custodial sentence, and continue offending to an older age. CSA victims were almost 5 times more likely

than similar aged peers from the community to be charged with any offence, being significantly more likely to be charged with all types of offences, with strongest associations yielded for sexual and violent offences and breach of orders. These differences were largely accounted for by the male CSA victims; however, CSA females were also significantly more likely than females from the general population to be charged with all types of offences, in particular threat of violence and assault. These findings suggest that offences committed by sexual abuse victims is not isolated to sexual offences or the male gender, therefore supporting claims that childhood abuse is associated with offending in general (Benoit & Kennedy, 1992; Hanson & Slater, 1988).

The sample of victims was of a sufficient size to meaningfully examine offences of a low base rate, namely those of a sexual or homicidal nature. These violent offences have the largest impact upon affected victims and the general community. The possible relationship of CSA to sexual offending in particular has been the subject of considerable speculation based on studies often of limited methodological sophistication (Hanson & Slater, 1988). Although the well known study group led by Widom (1989a & b) found no association between childhood victims of sexual abuse and violent offences of a sexual nature, this can be accounted for by the small sample size of CSA victims that largely comprised of female subjects. The current study was able to demonstrate that while the majority (99%) of victims of CSA were not charged for a sexual offence, they were 7.6 times more likely to be charged with this crime than the general population.

As expected, the increased rate of sexual offences is largely accounted for by male CSA victims, in particular those abused at an older age of around 12 years. Indeed the hallmark feature of this period is psychosexual development, whereby heightened sexual arousal may be paired with cognitive distortions relating to sexual relations and aberrant sexual urges which may develop and underlie sexual offending. However, these and other (e.g., poor social skills) underlying associated mechanisms were not examined in this epidemiological study, but may be alluded to with further analyses of a qualitative nature on the sexual offences (e.g., paedophilia vs. adult rape, sexual offences isolated to youth vs. protracted period of sexual offending) committed by the male victims of CSA. Mental illness, however, was a possible mechanism examined, revealing that victims who were charged with a sexual offence were several times more likely than victims who did not commit a sexual offence to have had contact with a public mental health service. While tempting to speculate sexual offending may have been precipitated by affect dysregulation or a serious psychotic illness, the nature and temporal sequencing of mental illness was not examined. At best, these findings suggest a highly dysfunctional and complex presentation among male victims of CSA who develop to perpetrate sexual offences.

An unexpected and shocking finding relates to the four CSA cases charged with homicide. Although the specific magnitude of the difference between populations examined in this study could not be determined due to the nil cases in the comparison group, applying statistics from the wider Australian population whereby two murders per 100,000 persons is expected, our results suggest that by comparison we can expect approximately 145 murders per 100,000 CSA victims.

Although one must be cautious given the limited sample size, this suggests that childhood sexual abuse poses a significant risk factor for the very serious offence of homicide. Findings from the present study also suggest that female victims are as likely as male victims to be charged with homicide.

This study extends upon and adds further support to the well accepted association between CSA and subsequent victimisaiton largely based on retrospective histories of CSA given later in life. While a higher proportion of police contacts were for reporting being a victim of crime, the majority (64%) of CSA victims did not report a subsequent experience of victimisation. However, compared to the general population, CSA cases were 1.14 times more likely to be a victim, a significant yet weak association. With the exception of theft and bad public behaviour, CSA cases reported being a victim for a range of offences, with highest associations found for sexual offences at 5 times, threats of violence at 4 times and violent offences at 3 times higher than the general population. On average, CSA cases reported more separate victimisation incidents than the general population; however, there was no difference in the number of separate incidents relating to sexual assault. This is the first prospective study to demonstrate that male victims of CSA were significantly more likely than males in the general population, but significantly less likely than their female abused counterparts, to report to the police being a victim of a subsequent sexual assault.

The abuse variables were generally not found to be of predictive utility for subsequent offending, and in this case the dose-response effect was not supported. This is inconsistent with other findings from this study population that

found a dose-response effect to mental health outcomes (Cutajar et al., 2010a, 2010b). Age, however, was found to be a significant abuse factor, with older age, particularly among males, being associated with a range of offending behaviours. Mental illness increased the risk of any offending among CSA victims by three times, highlighting the significant interplay between CSA, mental illness and offending.

Relying on contact with the police as a measure of offending and victimisation creates both a high threshold and a somewhat variable selection process. The absolute number of cases identified by this method will be underrepresented to a greater or lesser extent since a high proportion of offences go unreported, or for reported crimes, the offender may go undetected or the case not proceed to court. This is particularly well known for offences of a sexual nature. This study has somewhat mitigated this limitation by utilising charges rather than convictions. Although the findings reported in this study may be at a conservative rate, that a comparison group was employed and subjected to identical methods of ascertaining offending and victimisation outcomes provides a reliable guide to the level of association between CSA and offending and victimisation. Another limitation common to prospective studies of this nature relates to the biases of the study population who are more likely to represent children from disorganised and disadvantaged families. Without the ability to control for these confounding factors due to the nature of data linkage whereby the original data was collected for other purposes, it is difficult to know how much of the risks may be directly attributable to the effects of CSA alone. In addition, given the abused children who were the subjects of this study came to official attention, the level and nature of intervention

received and the impact this had upon offending or subsequent victimisation cannot be determined.

These findings have a number of implications for clinical, policing and judicial practices. Of perhaps most significant relevance is the need for therapeutic interventions targeted at adolescent male victims with a focus on positive sexuality in attempt to reduce their heightened risk of committing a sexual offence. The benefits of psychological treatment for trauma, addressing victims' mental health problems and preventing or addressing criminogenic risk factors such as low education and employment attainment, substance abuse, and negative supports, in the aftermath of sexual abuse to both male and female victims is also likely to reduce the risks of offending in general and violent offences in particular. Police officers' who come into contact with either male or female victims, and to lesser extent offenders, should be cognisant of the possibility of dealing with an individual with a history of sexual abuse and the need for sensitivity and respect. Legal and judicial representatives, as well as forensic psychologists and psychiatrists who may assess offenders, should take into consideration the complex interplay between history of CSA, mental illness, offending, the unlikelihood of adhering to court appointed orders and the (un)suitability of a harsh custodial environment when considering the needs of offenders. If a non-custodial disposition is considered appropriate, assertive follow-up, supports and interventions would be necessary to prevent additional offending. It may be beneficial for receptive practices within prisons to systematically enquire about CSA histories to alert involved custodial officers to better identify relevant needs such as sexual assault counselling, help understand and manage disruptive behaviours, be sensitive to

the need for protection from sexual predators, or adapt prison protocols (e.g., strip searches) to prevent further traumatisation. Offender treatment programs in the community or custodial setting may need to be adapted to consider the role of childhood abuse in attempt to reduce recidivism.

In conclusion, this is the largest prospective study to demonstrate with confidence that the majority of victims sexually abused during childhood do not perpetuate the cycle of violence by becoming an offender or by the ongoing victimisation of violence. However, relative to members of the general population, both male and female CSA victims are at an increased risk for committing or experiencing a range of offences, in particular of a sexual or violent nature. This study also indicates that adolescent males who experience serious sexual abuse form a high risk group of subsequently committing sexual offences and require active intervention and follow up.

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